

OCT 4 1928

Eisler

are of NEON
AND GENERAL

a complete line
for the manufac-

neon sign machinery

CATALOGUE N

EISLER ENGINEERING CO. INC.

772 SO. 13TH ST.

NEWARK, N.J.

**NEON
SIGN MACHINERY**
GAS & AIR REGULATORS

Electrodes

LEAD-IN WIRES

BURNERS

BULB
BLOWING
MACHINES

Spark
Coils

OVEN
S

REPAIR
FIRES

TORCHES

GAS
& AIR
MIXERS

VACUUM
PUMPS

GAS
BOOSTERS

*Air
Pressure
Blowers*

TIPPING
TORCHES

EXHAUST POSITIONS

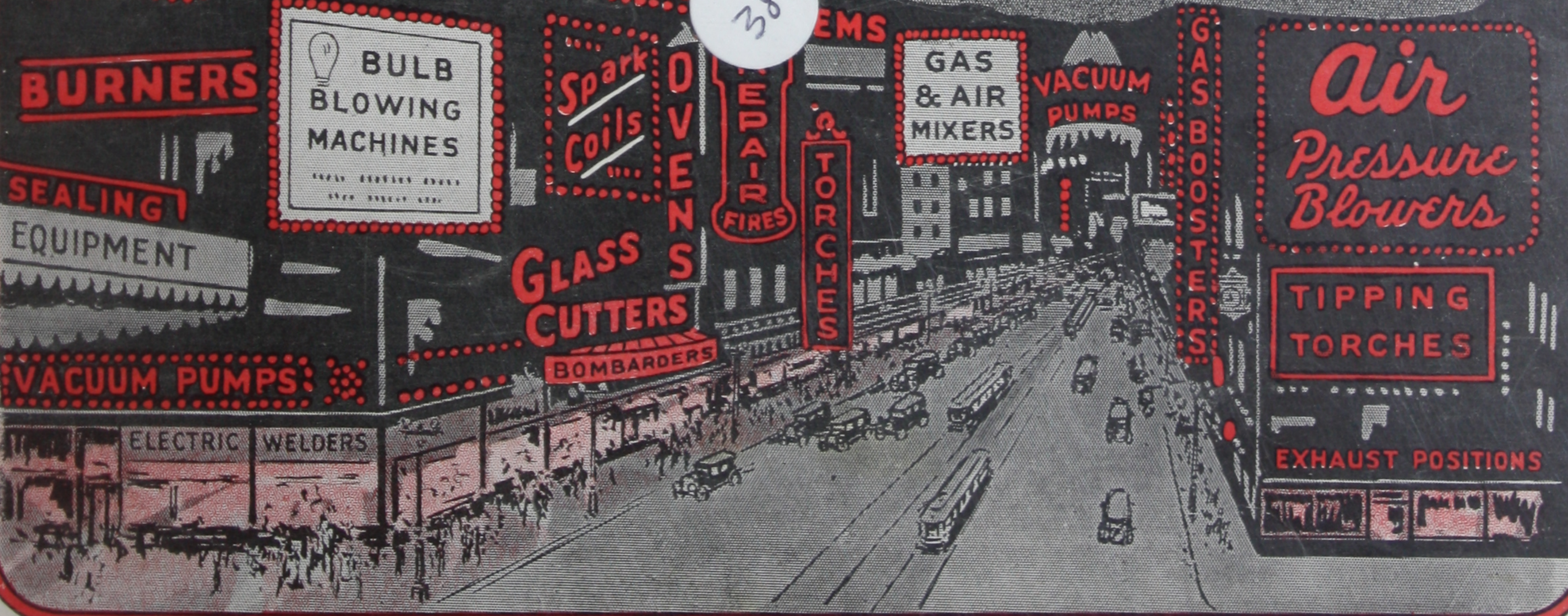
SEALING
EQUIPMENT

VACUUM PUMPS

ELECTRIC WELDERS

GLASS
CUTTERS

BOMBARDERS



38 623-8 gm

Foreword

This catalogue is devoted exclusively to the NEON SIGN TUBE MANUFACTURERS AND THE GLASS WORKING INDUSTRY.

Again EISLER Glass Working Machines have proven their value, necessitating our opening of a special department for the development of machines necessary for the manufacture of Neon Tube Signs.

Eisler Machines are in a class by themselves, always more than satisfying the expectation of our clients, each machine embodying our slogan, "Superior Design and Quality."

The EISLER PLANT is the largest of its kind, exclusively devoted to the manufacture of NEON SIGN TUBE EQUIPMENT AND GENERAL GLASS WORKING MACHINES.

The Eisler plant also manufactures a complete line of production machinery necessary for the manufacture of Radio Tubes and Incandescent Lamps. We manufacture over two hundred and fifty different types of machines used in the Glass Working Industry.



The Eisler Engineering Company, Inc.
1928

TERMS AND CONDITIONS

Prices:	All prices are net f. o. b. our works, Newark, N. J. No Motors are included in the prices unless specified.	Claims:	Should be made within 10 days of receipt of goods.
Motors:	We can furnish Motors of any desired frequency. When ordering, state whether they are to be AC or DC, 110 volts, 200 volts, 25, 40, 50 or 60 cycles, one, two or three phase.	Shipments:	All machines are fully insured, and shipped at the risk of the consignee.
Transformers:	When ordering state whether 110 or 220 volts, 25, 40, 50 or 60 cycles. We are also prepared to make special Transformers.	Illustrations:	Are not binding as improvements and changes are being made on the machines from time to time.
Payments:	In all cases, one third of the total amount with the order, and the balance as per our arrangement.	Export:	We box machines for export and deliver to New York Piers alongside of Steamer, charging 3% for this service.
Delivery:	Deliveries are made as promptly as possible. We cannot assume any responsibility in case of delay from causes beyond our control.	Orders:	When placing orders please refer to machine numbers in order to avoid confusion. Specify what operation is required, kind of glass used, and if possible send sample or sketch of object in question.
Guarantee:	All machines are guaranteed for one year. Castings or parts found defective within this period, except from the usual wear and tear, will be replaced free of charge.	Estimates:	When asking for estimates, kindly state distinctly what type and style of NEON tubes you intend to manufacture, as we make over 200 styles of machines, and this information is very essential.

10 40-136625 705

A Trip Through the Eisler Organization

The EISLER Engineering Company is the largest organization of its kind devoted exclusively to the manufacture of machinery for the production of Neon Sign Tubes and the Glass Working Industry. We are only showing a few of the many departments of the EISLER plant.



- 1—Main Office
- 2—Office of Charles Eisler
- 3—Engineering Department
- 4—Men who Make the Famous Eisler Products

- 5—Corner of the Lead Wire Welding Department
- 6—Special Wire Department
- 7—Base Drilling Department
- 8—Section of Milling Department

- 9—Main Machine Department
- 10—Heavy Drilling Department
- 11—Gang Drills
- 12—High Speed Drills
- 13—Heavy Radial Drilling
- 14—Plant of the Eisler Engineering Co. 1926

From the above you can readily see, we are fully equipped to fill all your requirements promptly and efficiently

Equipment Necessary for the Manufacture of Neon Sign Tubes

When a small production is required, simple hand operated machines are employed. Large production demands automatic machinery. "we make them".

EQUIPMENT REQUIRED

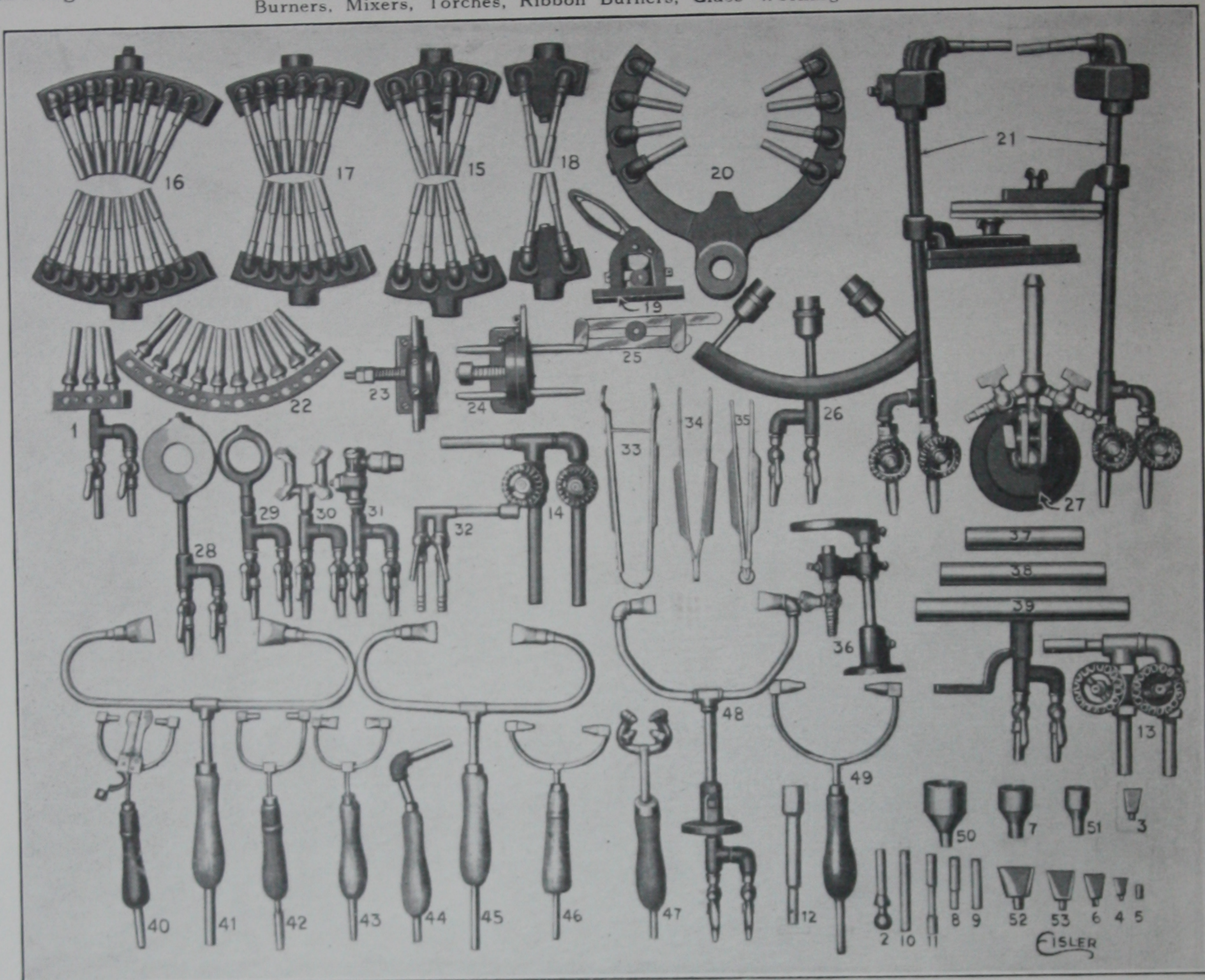
	Page
BENCH FIRES, tubular burners, blast burners, oxygen burners and torches.	4, 5, 6
ELECTRIC FURNACES	7
ELECTRIC SPOT WELDERS	7
ELECTRODES — LEAD WIRES	8
GLASS CUTTING MACHINES	8
FLARE MACHINES	8
STEM MACHINES	9
SEALING MACHINES	10—11
EXHAUST POSITIONS	12
VACUUM PUMPS	13
HIGH FREQUENCY APPARATUS	14
GAS BOOSTER & REGULATOR	15
AIR PRESSURE BLOWER & REGULATOR	15
GLASS SPECIALTIES	16
MISCELLANEOUS, Clamper, Wire Cutters	16
GUM RUBBER, nickel wire, nickel ribbon, molybdenum wire and copper clad	17
RHEOSTATS	18
TRANSFORMERS	18
SPECIAL MACHINES	19
USEFUL INFORMATION	20

SERVICE — We maintain an engineering department which is especially prepared to assist in the selection of equipment and instruct in its operation.

BURNERS

Artificial Gas — Natural Gas — Oxygen

Showing a few of the many different sizes, types and arrangements of burners we manufacture.
Burners, Mixers, Torches, Ribbon Burners, Glass Working Tools



Cut No. 117-D

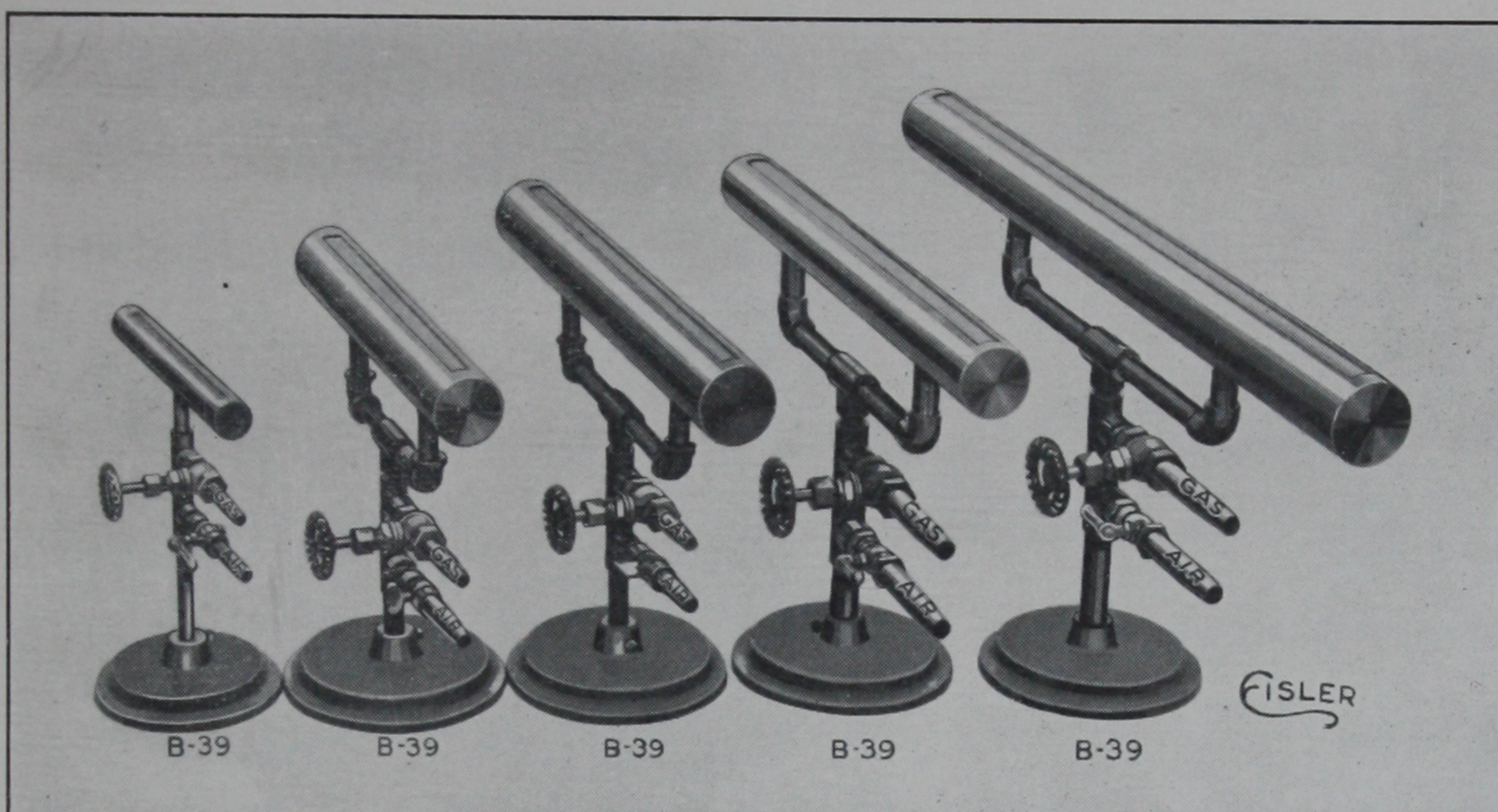
- 1—Ball joint adjustable burners with $\frac{3}{8}$ gas and air mixer, adaptable for any type burner.
- 2—Ball joint socket with burner No. 9, can however, be made with any type burner.
- 3—Fish tail burner $\frac{3}{4}$ inch across face for use in all heavy type tipping torches. See torch 49 & 45.
- 4— $\frac{1}{2}$ inch fish tail burner across face to be used in light type splicing torches. See 46 & 43.
- 5—Fish tail burner $\frac{3}{8}$ diameter, used in hand type tipping torches. See 40 & 42.
- 6—Fish tail burner 1 inch across face used in heavy type splicing torches. See 48.
- 7—Cannon burner $1\frac{1}{4}$ inches across face, used for any special work.
- 8—Sleeve type cannon burner.
- 9—Finishing Fire 2 inches long.
- 10—Finishing fire 3 inches long.
- 11—Finishing fire with flexible copper insert 3 inches long, for bench fires and universal use.
- 12—Rose burner $\frac{3}{4}$ inch diameter at the tip.
- 13—Cannon fire with $\frac{3}{8}$ inch gas and air mixers with burner 8.
- 14—Cannon burner with $\frac{3}{4}$ gas and air mixer.
- 15—4 point segment fires with No. 11 burners for use on 21.
- 16—8 point segment fires with No. 11 burners for use on 21.
- 17—6 point segment fires with No. 11 burners for use on 21.
- 18—2 point segment fires with No. 11 burners for use on 21.
- 19—Bench type rubber tubing pinch cock, listed in our catalog as No. 112. Standard for $\frac{3}{4}$ and 1 inch O. D. rubber tubing.
- 20—Ring fires, with No. 9 burners, has a radius of 5 inches.
- 21—Bench fires, listed in our catalog as No. 115. Burner numbers 15, 16, 17, 18, as shown in this cut can be used on this machine.
- 22—10 point ball joint adjustable burners. Number 2, 8, 9, 10, 11, burners can be used on this machine. Adaptable for any purpose.
- 23—Light type adjustable gas and air (economizer) shut-off.
- 24—Heavy type gas and air (economizer) shut-off.
- 25—Rubber tube hand pinch cock, listed in our catalog as 112-H.
- 26—Half ring fire, can be used with burners No. 7, 50, 51, or any other combination.
- 27—Bench type adjustable cannon fire.
- 28—Crack off iron $\frac{1}{8}$ inch gas and air mixer, listed in our catalogue as 113-S.
- 29—Crack off iron for large neck bulbs.
- 30—4 burner tipping torch.
- 31—Adjustable ball joint rose burner with $\frac{1}{8}$ gas and air mixer, burners No. 7, 50, 51 can be used.
- 32—Long stem rose burner with $\frac{1}{8}$ gas and air mixer using burner No. 12.
- 33—Bulb extractor.
- 34—Light type sealing tweezer, shown in our catalog as No. 2, cut 150.
- 35—Heavy type sealing tweezer with ball joint shown in our catalog as No. 3, cut 150.
- 36—Shallow Bunsen Burner type soldering pot.
- 37—38—39—Ribbon fires used for annealing or working long glass tubing. Can be furnished in any length from 4 inches to 48 inches for either gas and air or gas and oxygen.
- 40—Light type double burner tipping torch with nickel shields, with burner No. 5.
- 41—Heavy type splicing torch for heavy glass work with burner No. 52.
- 42—Tipping torch with burner No. 5.
- 43—Tipping torch with $\frac{1}{2}$ inch wide fish tail burner, with burner No. 4.
- 44—Tipping torch with single fire No. 9.
- 45—Splicing torch with burner No. 53.
- 46—Heavy type tipping torch with burner No. 6.
- 47—4 Burner ring type hand tipping torch, used where sharp fires are required.
- 48—Bench type Heavy Duty splicing or annealing fires with gas and air mixer with burners No. 52 or 53.
- 49—Heavy type tipping torch with burner No. 6 or 53.
- 50—Flat cannon burner. Can be made up to $2\frac{1}{2}$ inch in diameter.
- 51—Flat cannon burner same as 7 and 50, $\frac{3}{4}$ inch across face.
- 52—Fish tail burner $1\frac{1}{8}$ inches across face.
- 53—Fish tail burner 1 inch across face.

GAS, AIR AND OXYGEN BURNERS**TUBULAR BURNERS**

For Gas & Air

These burners are made in all sizes and types.

In all lengths, from two to forty-eight inches



Tubular Burners B-39

All Burners shown are Carried in Stock for Immediate Shipment

BLAST BURNER—LIGHT TYPE

Gas, Air and Oxygen burner recommended for use with pyrex glass. Complete with set of three nipples.



Burners No. 27-OL

BLAST BURNER—HEAVY TYPE

Same as burner No. 27-OL but larger and more powerful. Direct connected to oxygen tank. Complete with set of two nipples.

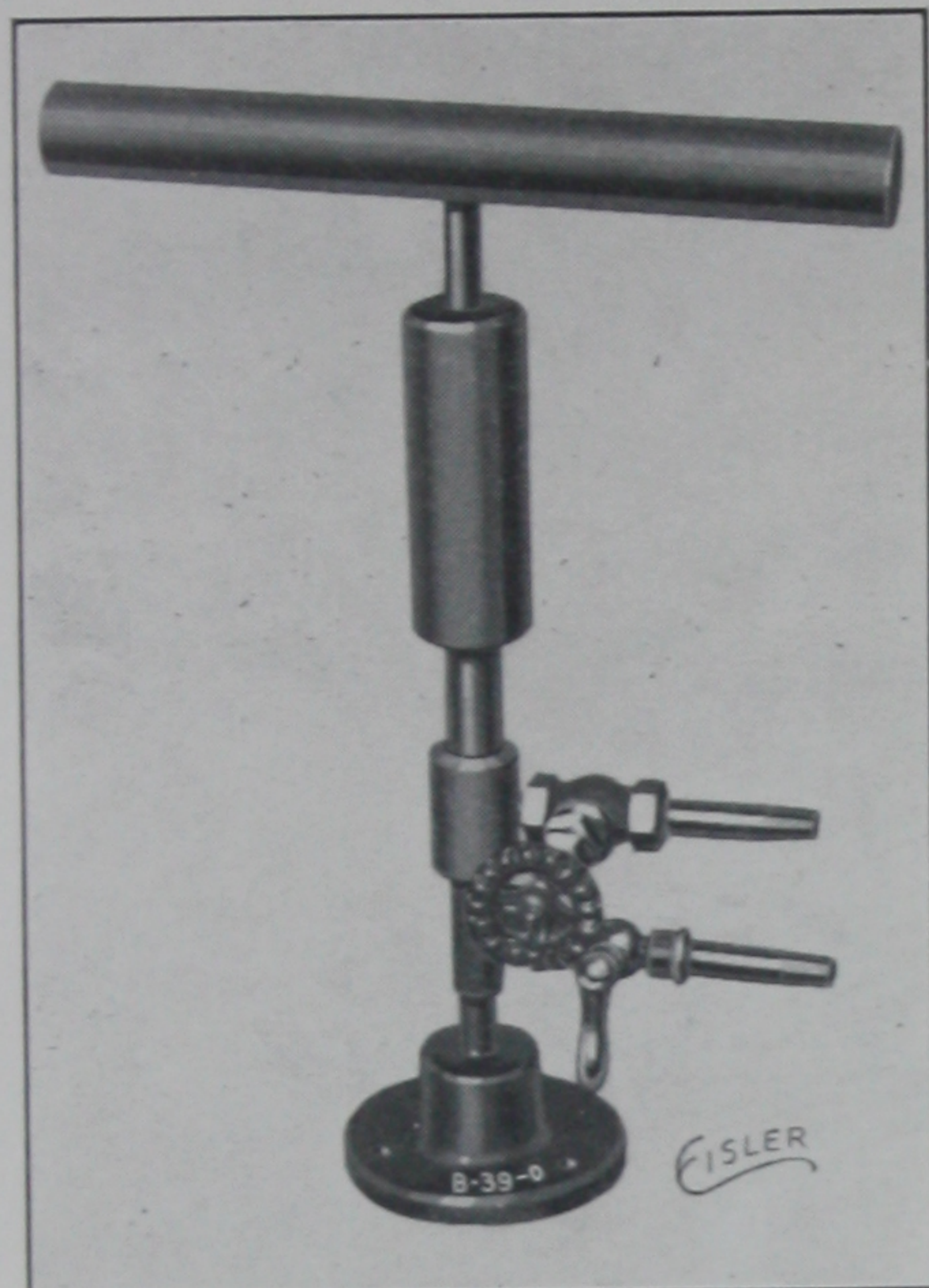


Burner No. B-27-O

GAS, AIR AND OXYGEN TORCHES

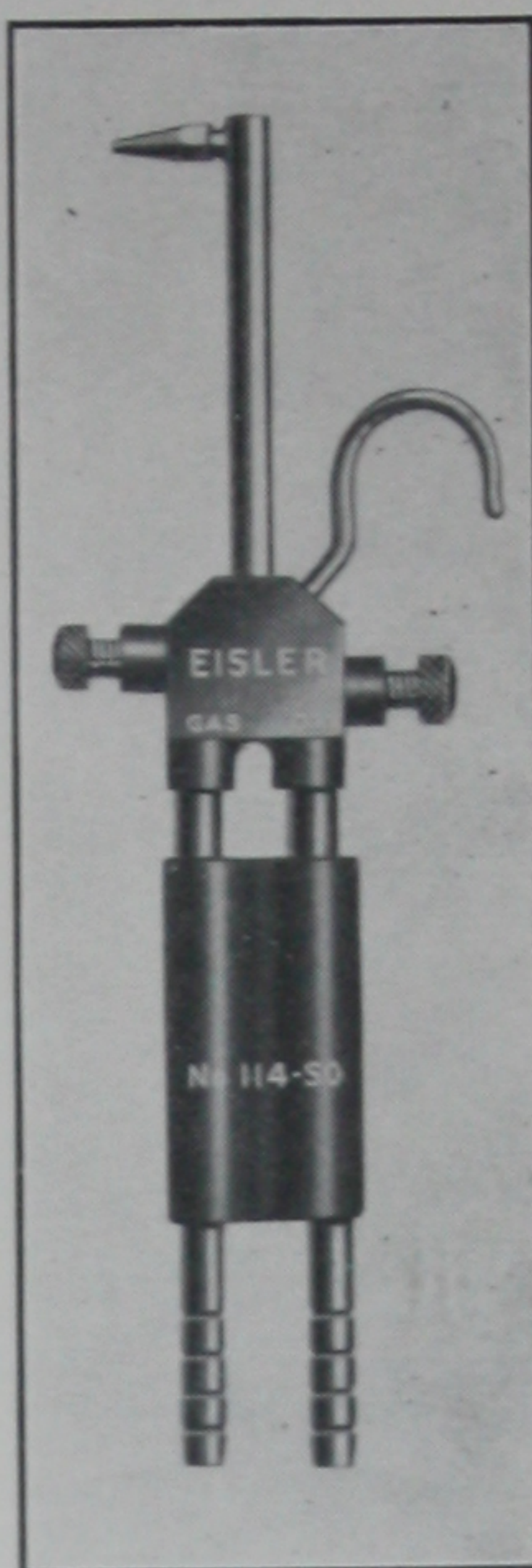
A few of the many torches and burners we manufacture. We are specialist on burners of all kinds. If you have any special needs, consult us.

OXYGEN TUBULAR BURNER
Made in all lengths, from
two to forty-eight inches.



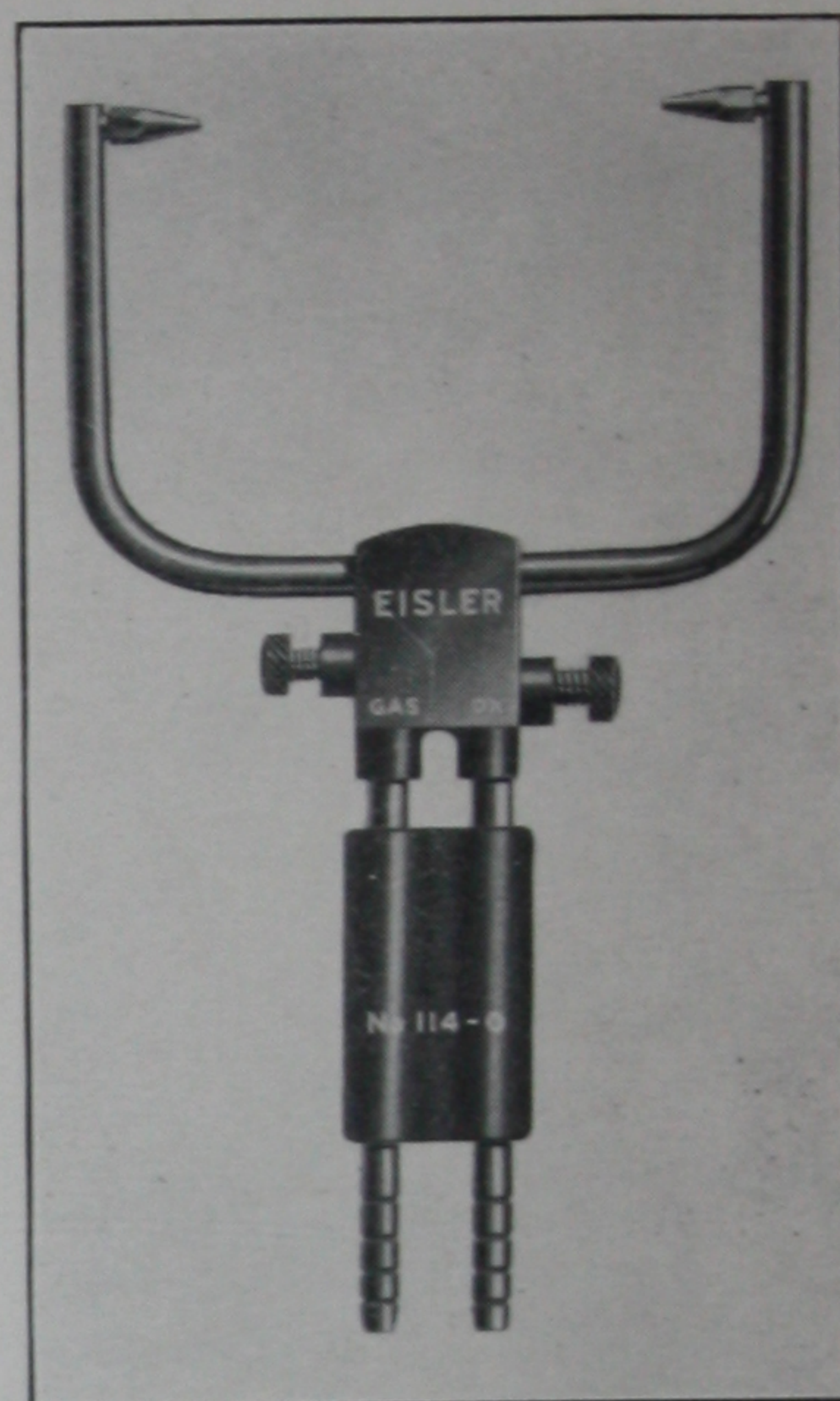
Burner No. B-39-0

**SINGLE OXYGEN
BURNING - OFF
TORCH WITH MIXER**



Burner No. 114-SO

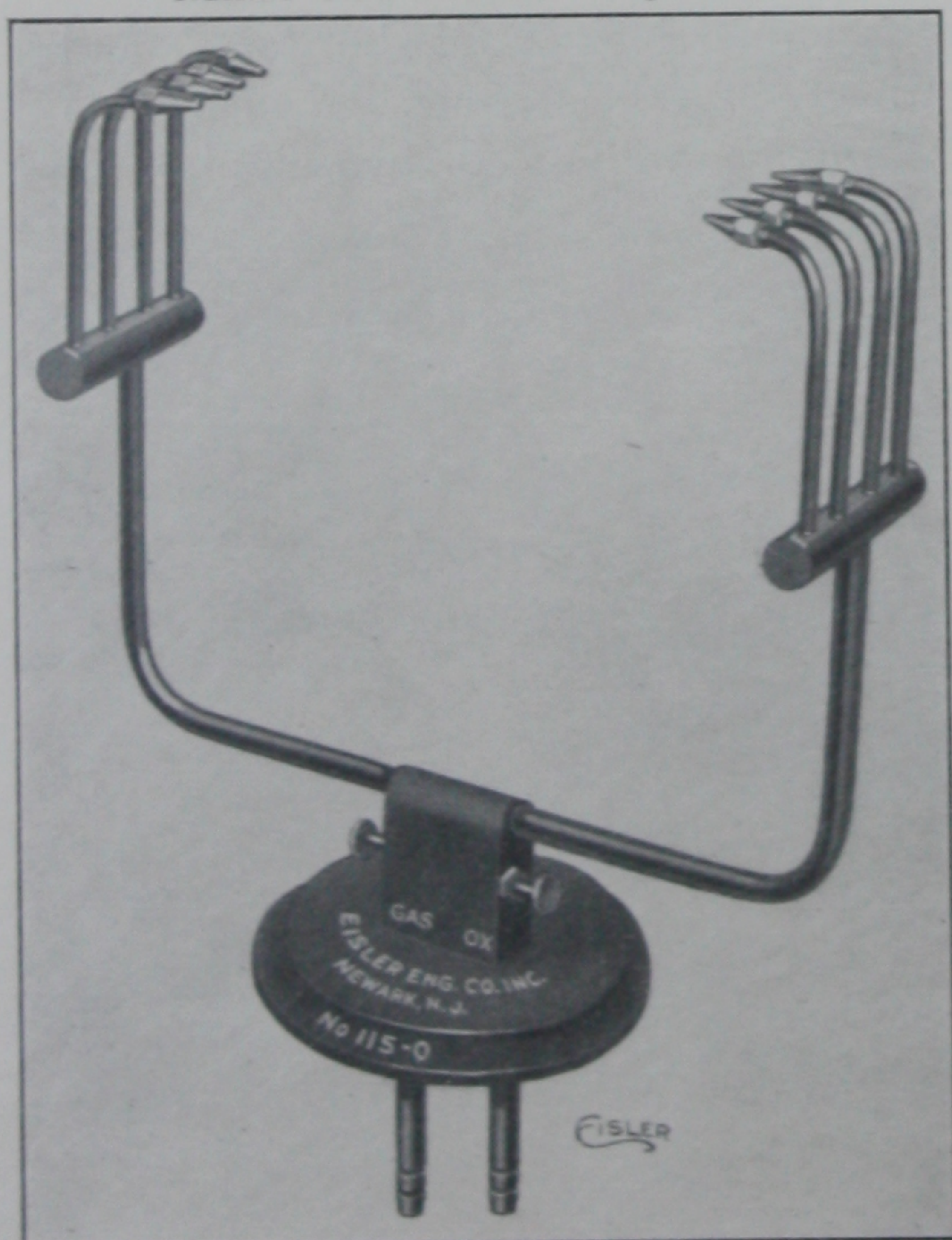
**DOUBLE OXYGEN
BURNING - OFF
TORCH WITH MIXER**



Burner No. 114-0

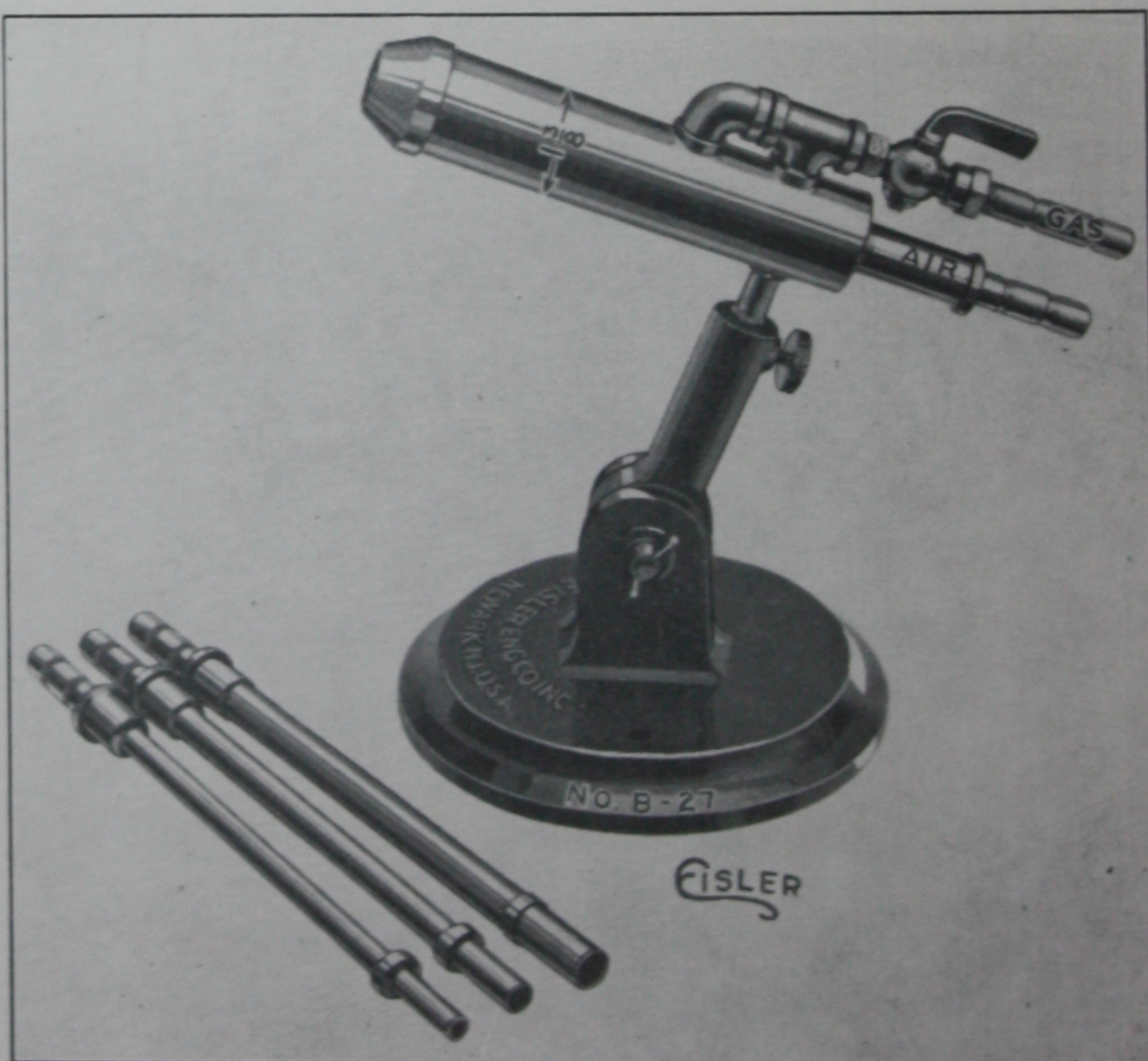
All Burners shown are carried in stock for immediate shipment

OXYGEN CROSSFIRES
For Bench work, with mixer.
Made two to twelve jets.



Burner No. 115-0

BLAST BURNER — HEAVY TYPE
Powerful gas and air burner with set of three nipples.



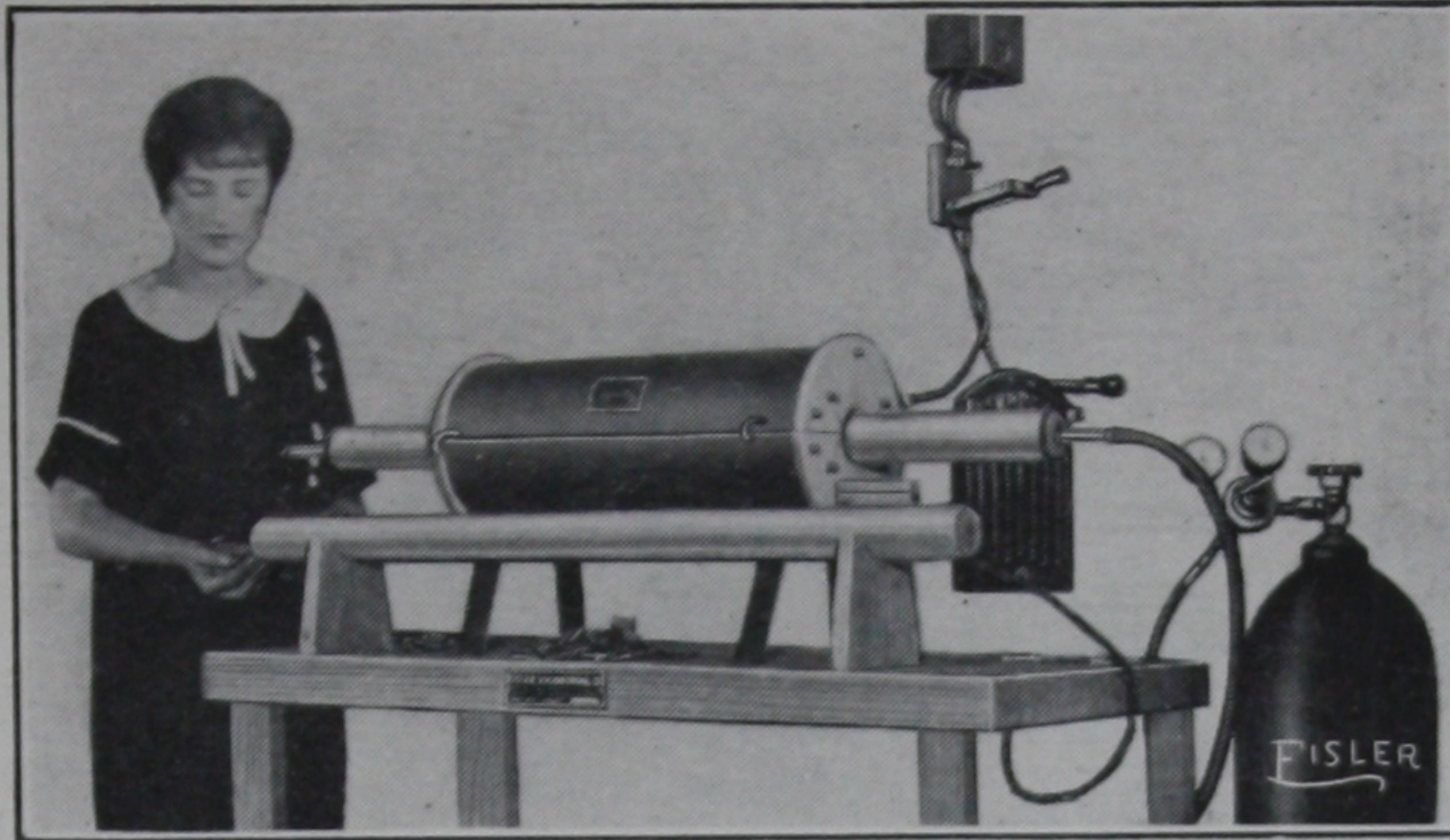
Burner No. B-27

WHEN ORDERING IT IS ABSOLUTELY NECESSARY TO STATE WHAT KIND OF GAS WILL BE USED

DEGASIFYING APPARATUS

This electric furnace is used for degasifying the metal parts used in the neon tube.

Our stock size Electric Heaters are made for 110 and 220 volts. When ordering, kindly mention whether you want the Rheotstats for either 110 volts or 220 volts.

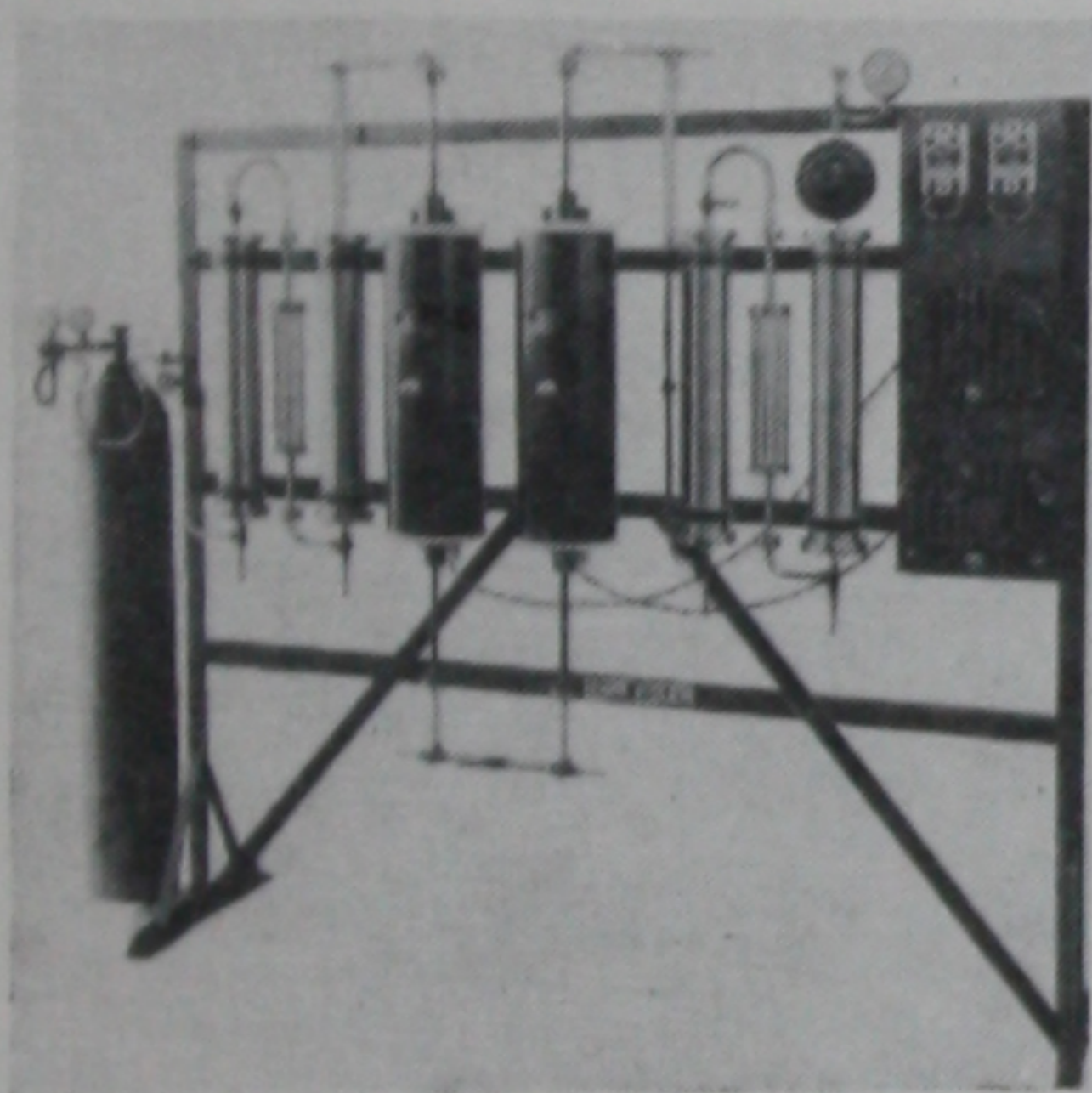


Machine No. 85

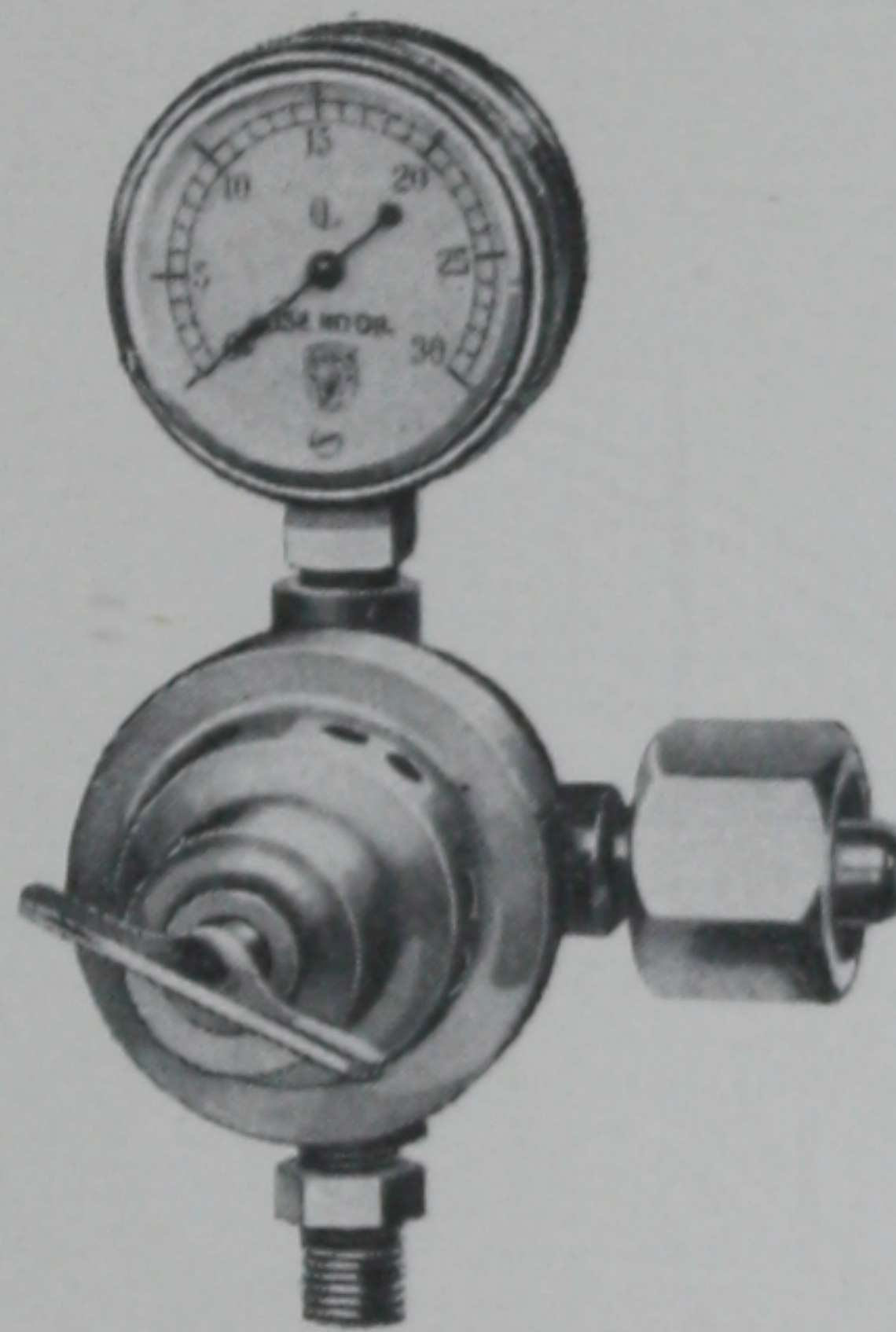
Dimensions of our Standard Furnaces:
Bore, 2--3/16 inches
Length, 20 inches
Amperage, 18 on 110 Volts
Amperage, 9 on 220 Volts
Size of Silicate Tubes, 2" x 40"
Can be used on any frequency desired.

GAS PURIFIERS

Apparatus for Purifying Gas. This is only one of the 15 Types we make.



Machine No. 80-5B

SINGLE DIAL GAUGE

Machine No. 149-A

We can readily supply all types of Hydrogen, Nitrogen, Oxygen Pressure Reducing Gauges from stock.

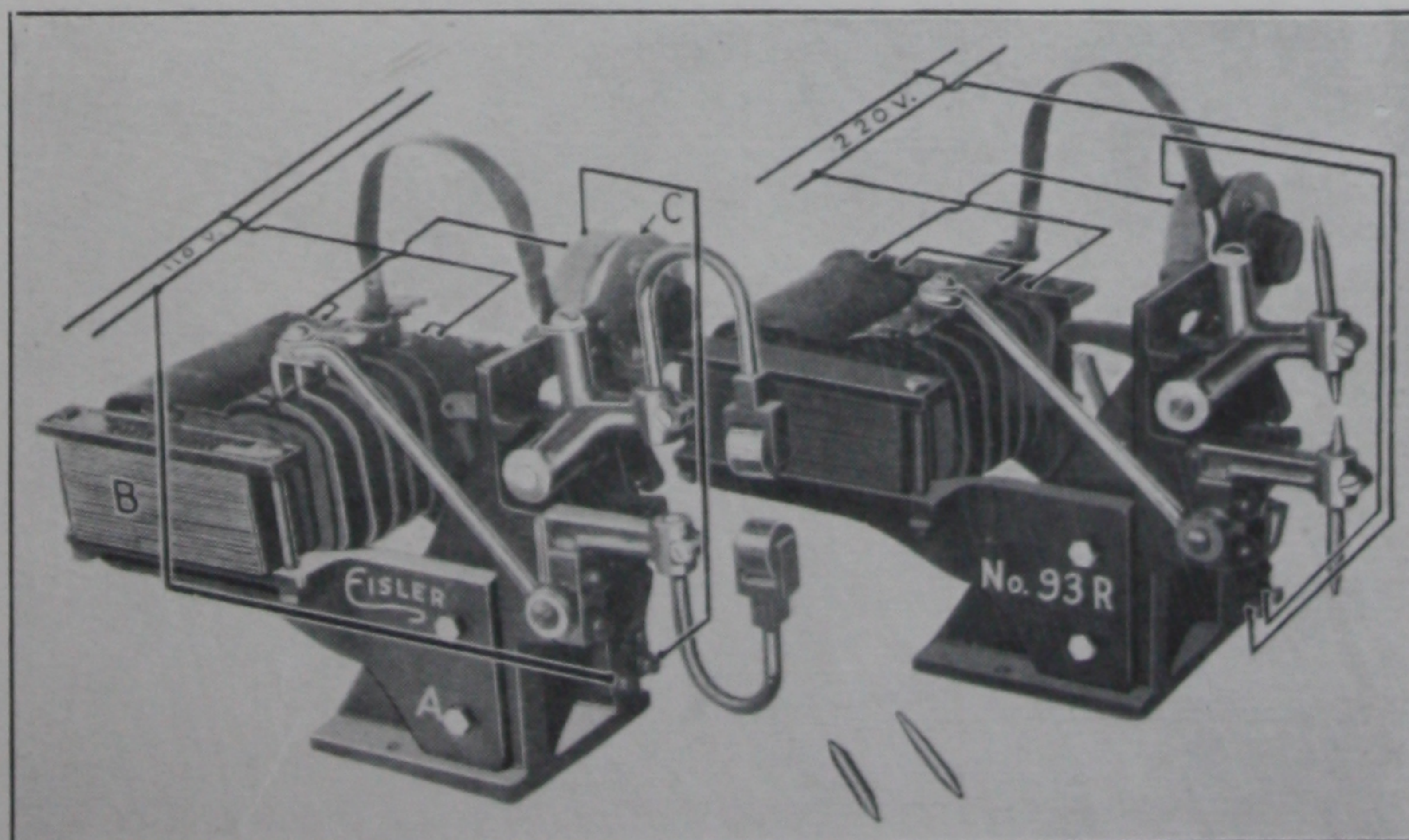
DOUBLE DIAL GAUGE

Machine No. 149

ELECTRIC WELDER FOR GENERAL USE

Made in two sizes, 1/2 & 1 K. V. A.

The Eisler Electric Welder is one of the most compact and efficient welding machines on the market, capable of very rapid production.

ELECTRIC WELDING MACHINE

Machine No. 93-R

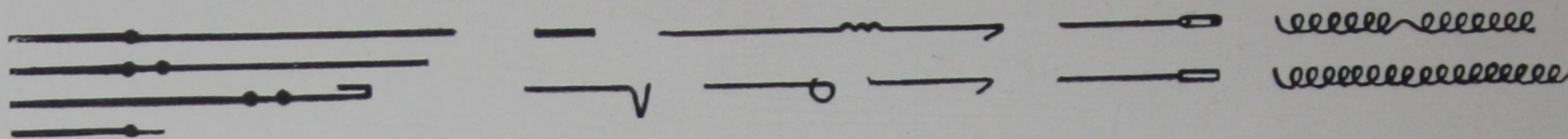
Universally used Welding Machine Designed Specially for Rapid Production.

Complete Machine includes Foot Treadle, Rheostat, and 1/2 KVA Transformer. When ordering, please specify voltage and cycle.

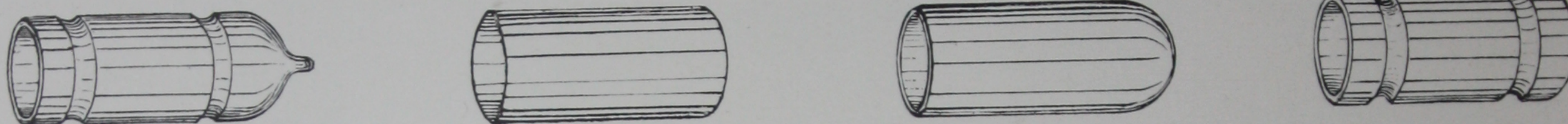
ELECTRODES—LEADWIRES

We are well equipped to supply your rush orders on Electrodes and Leadwires of all types. We maintain a completely equipped department for manufacturing wire specialties of all types such as used in neon tube signs. (Please note our welding department pictures on page 2, No. 5 and 6.)

VARIOUS LEADWIRES



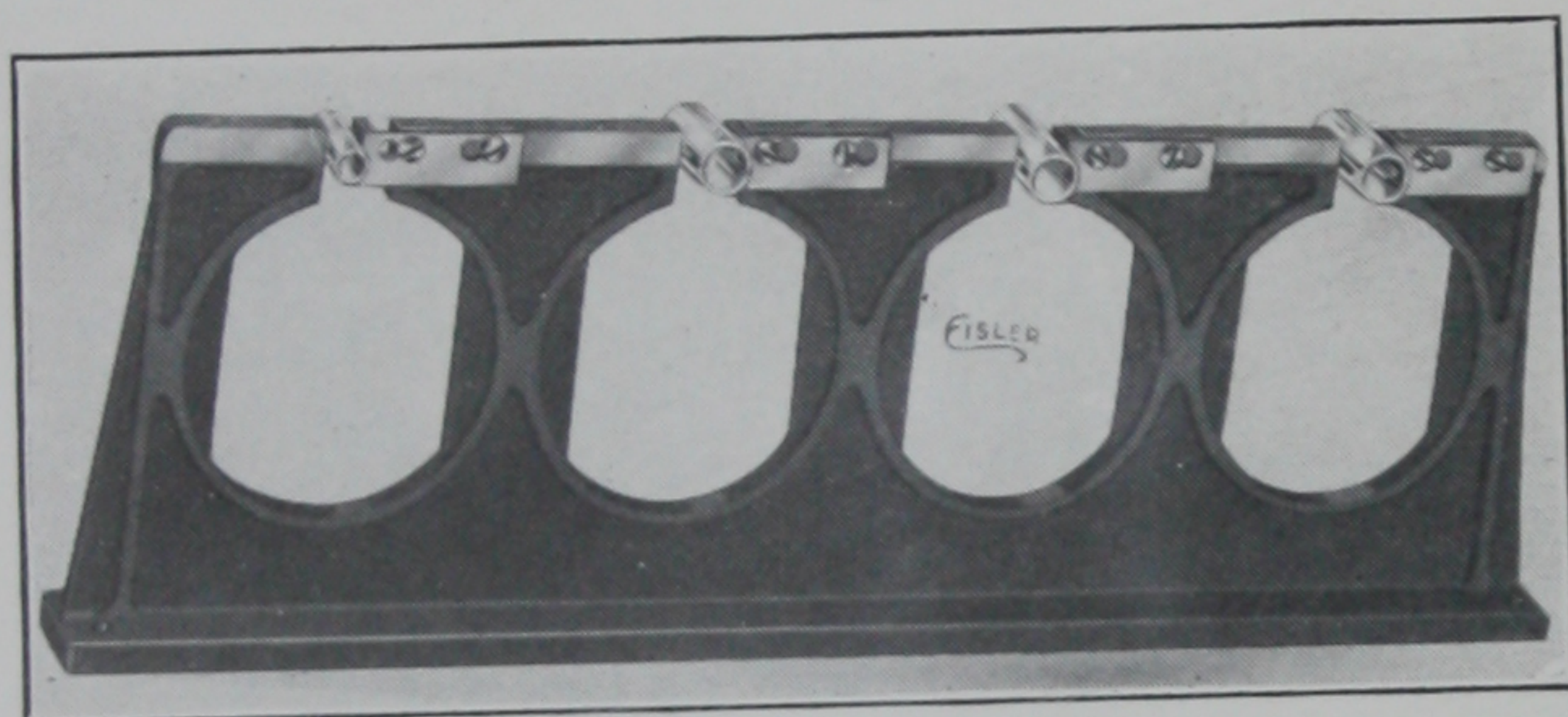
VARIOUS ELECTRODES



GLASS TUBE SORTING GAUGES

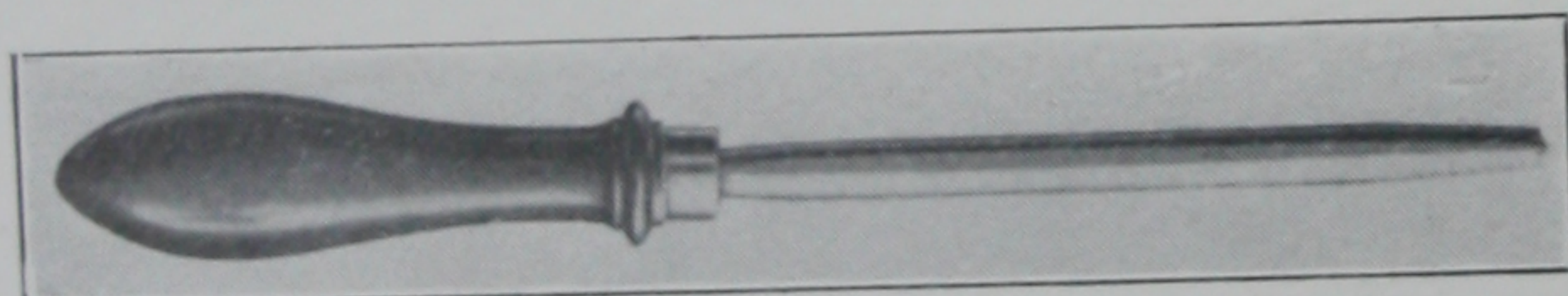
It is very important that glass tubing be gauged for sizes, in order to obtain the best results.

ADJUSTABLE GLASS TUBE SORTING GAUGE WITH JAWS OF TOOL STEEL HARDENED



Machine No. 9

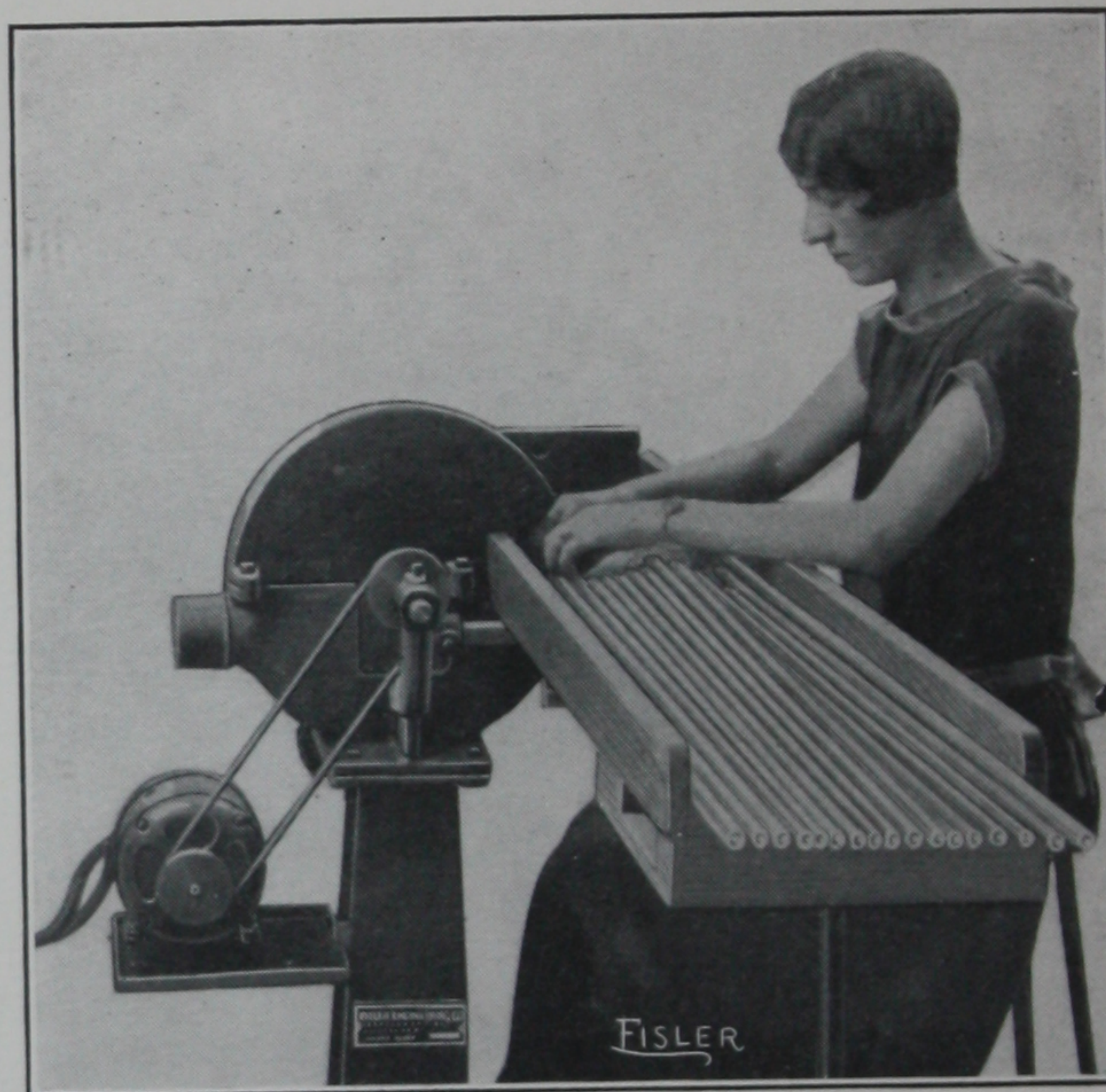
GLASS CUTTING WHEEL DIAMOND DRESSER



Machine No. 10-D

GLASS CUTTING MACHINE

This machine is made for cutting glass tubing, pyrex, lead or lime glass.

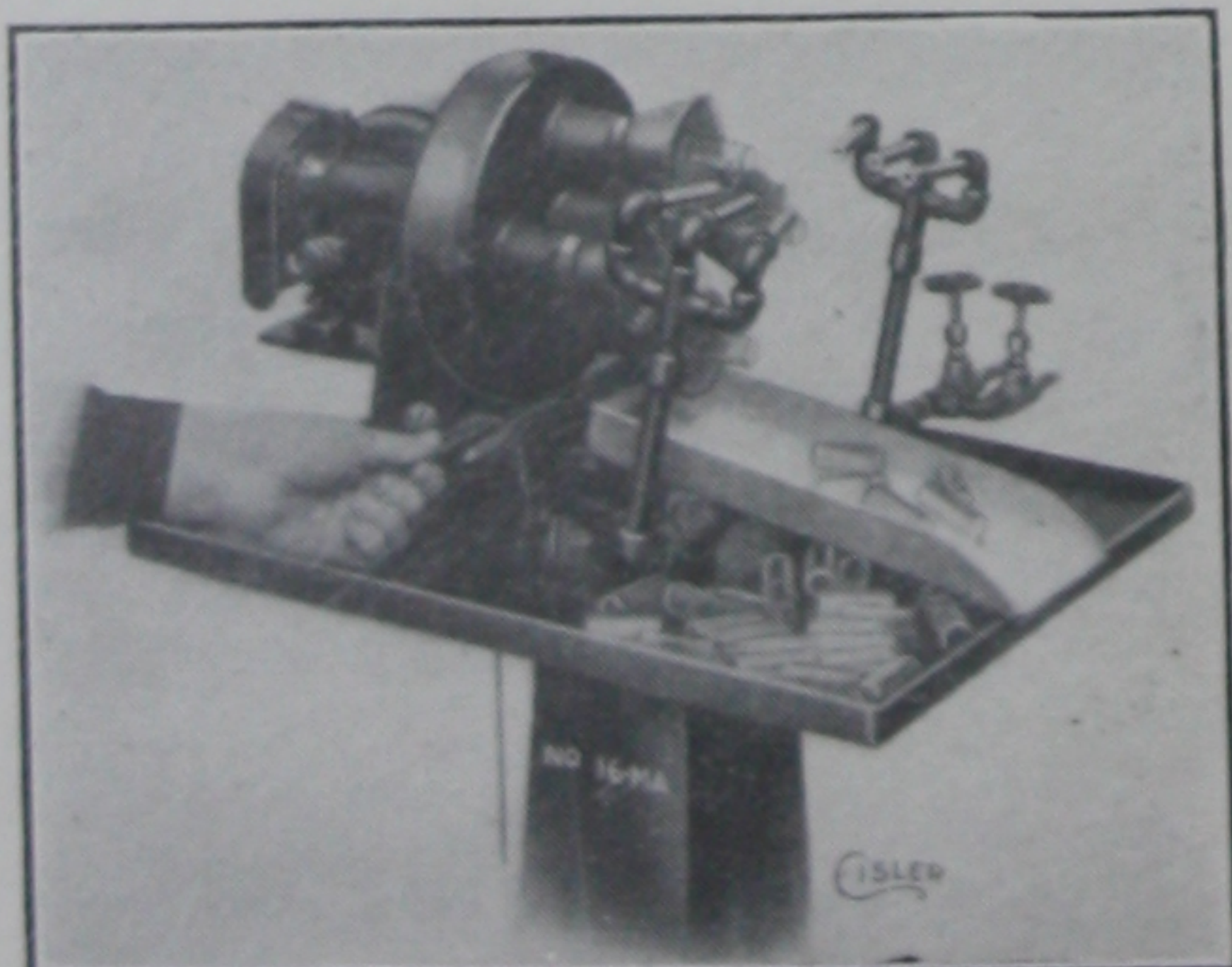


Machine No. 11

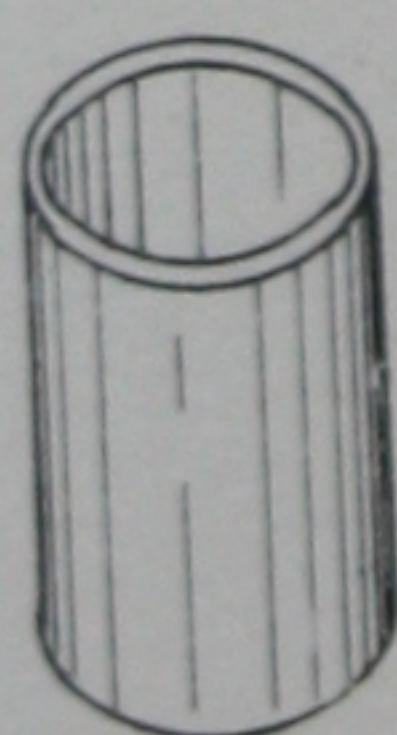
FLARE MAKING

When small quantity of flares are required we recommend our hand operated machine. For larger production, the automatic flare machine.

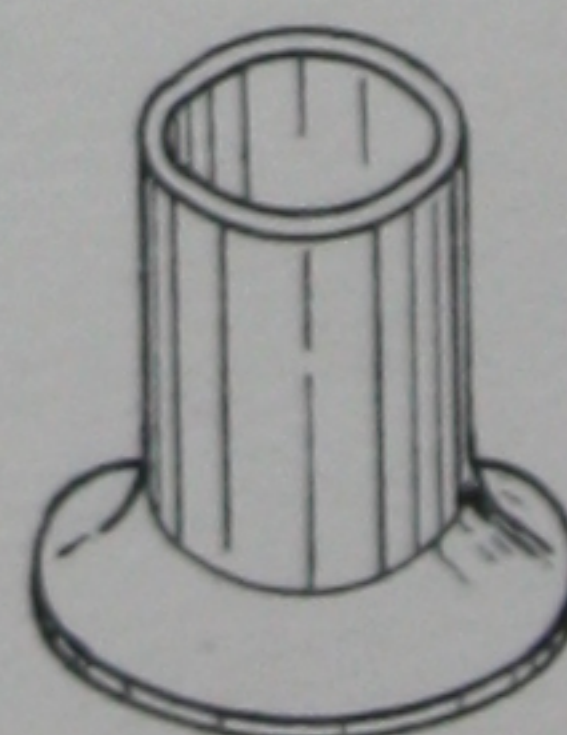
4-HEAD HAND OPERATED TYPE FLARE MACHINE



Machine No. 16 MA

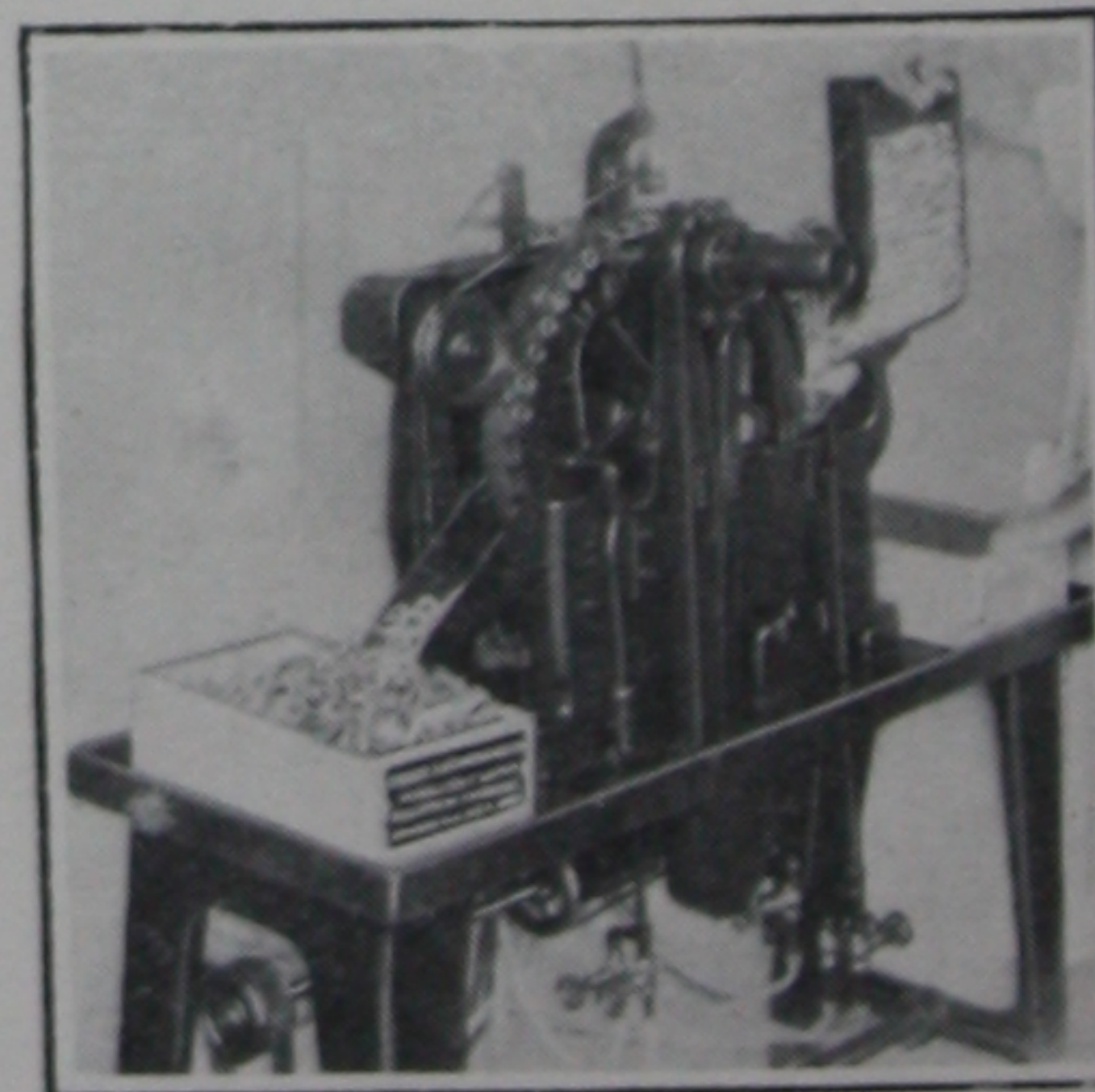


BEFORE



AFTER

EISLER HORIZONTAL AUTOMATIC FLARE MACHINE



Machine No. 18

STEM MAKING

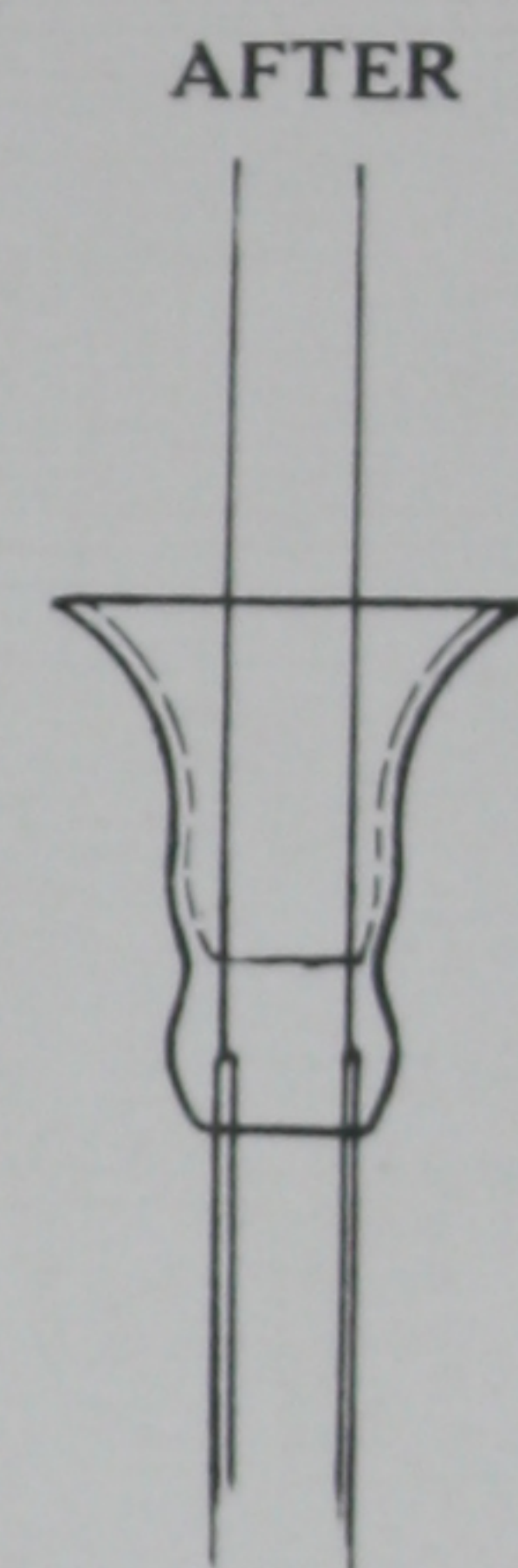
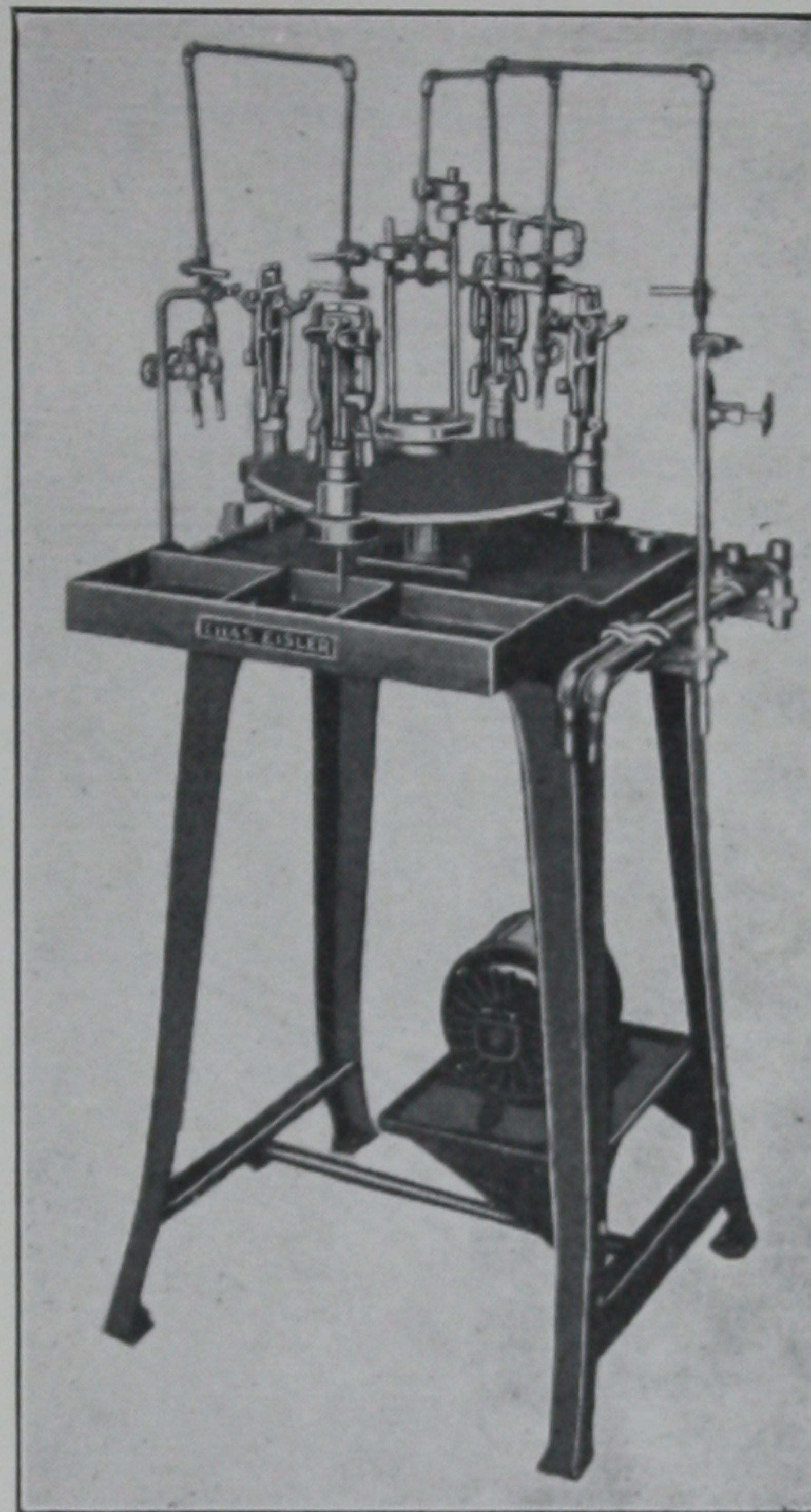
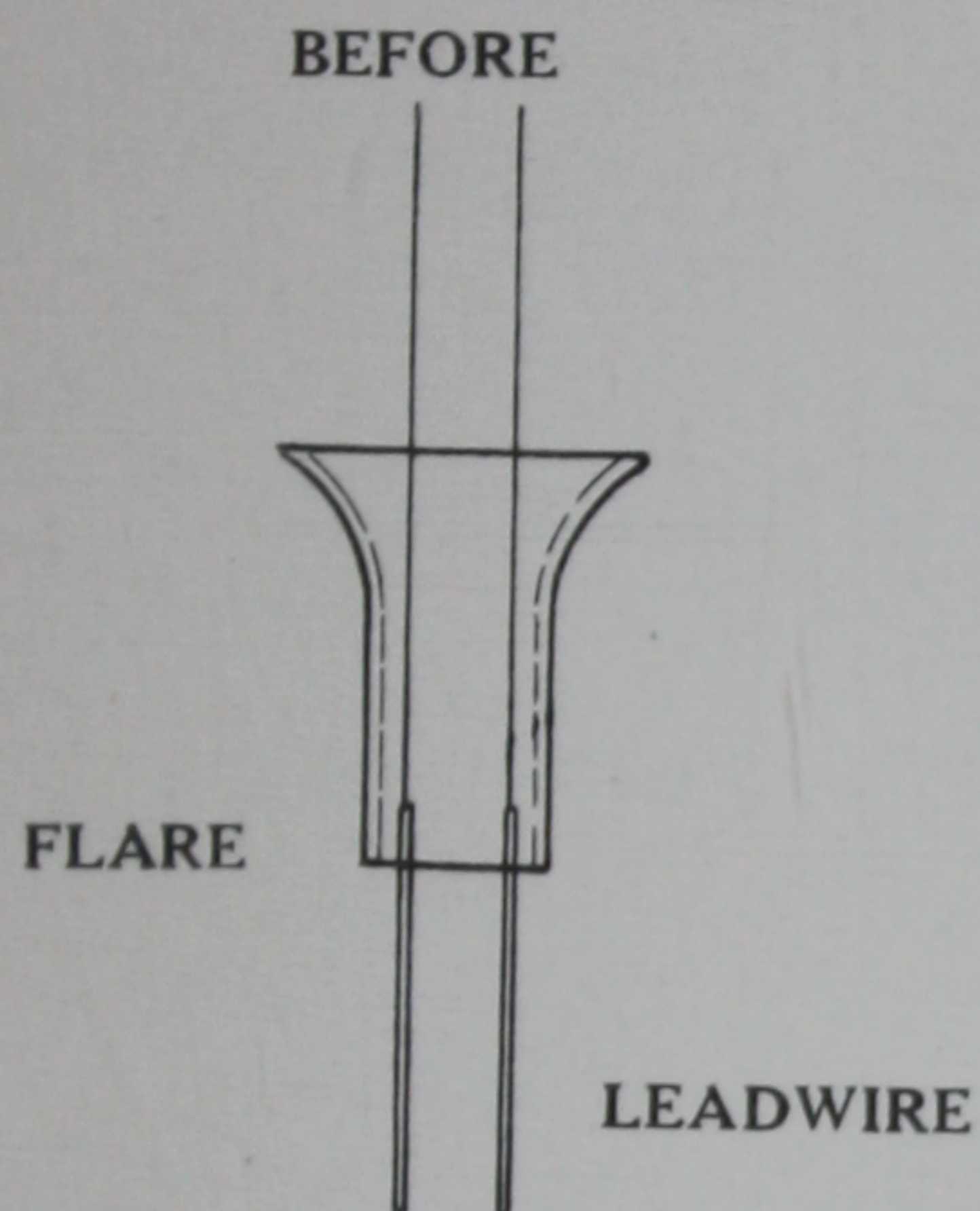
Very little skill is required to make stems on the Eisler stem machine, which greatly simplifies the manufacture of neon tubes.

Stem making is the term used for combining the leadwire and glass flare, as shown by the line cuts. These machines can be used for one to ten leadwires, combining any number desired in the flare.

We manufacture over fifteen types of stem machines, selection of machines depends on type of work. The production determines the kind and size of machine to be used.

A FEW OF THE MANY HEAVY AND LIGHT TYPE STEM MACHINES WE MANUFACTURE Made Automatic And Hand Operated

FOUR HEAD LIGHT TYPE STEM MACHINE



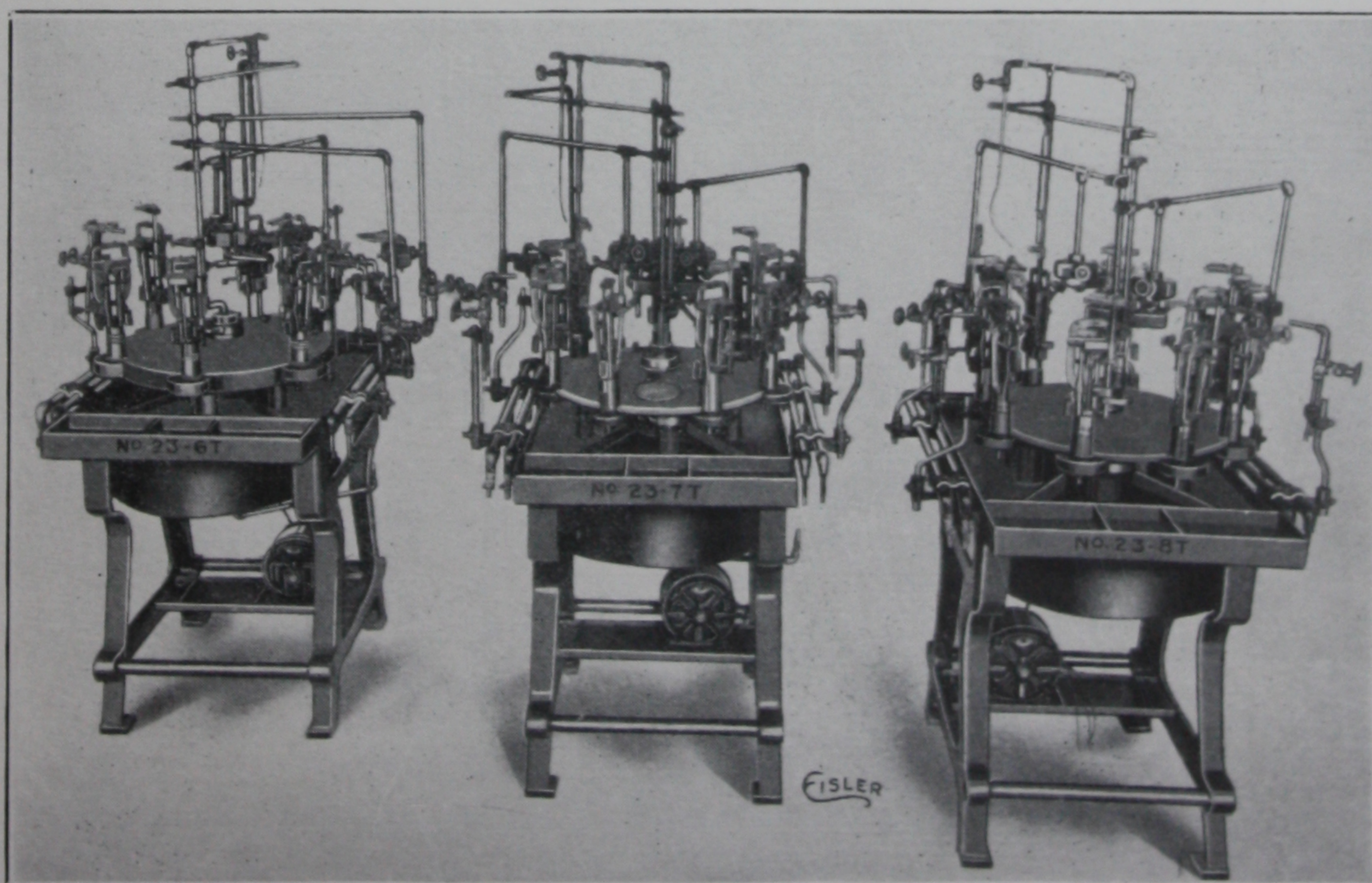
Machine No. 25

AUTOMATIC STEM MACHINES

SIX HEAD

SEVEN HEAD

EIGHT HEAD



No. 23-6T, 6 Head,

No. 23-7T, 7 Head,

No. 23-8T, 8 Head,

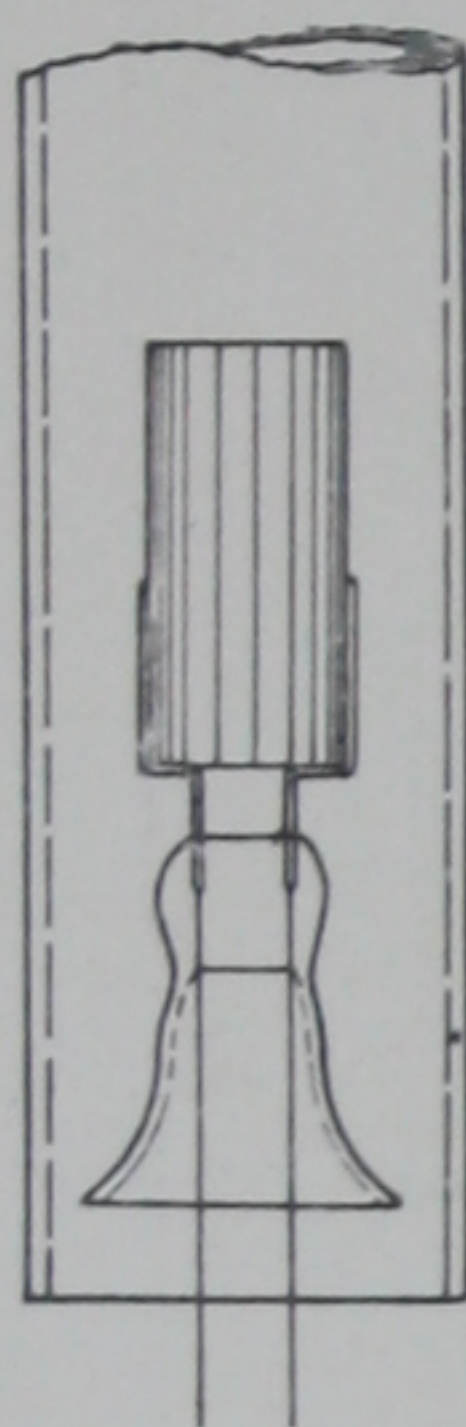
SEALING MACHINES

The sealing operation is readily performed without any difficulty on the Eisler sealing machine. This machine seals the flare to the glass tubing. Lime, lead or pyrex glass may be used. We manufacture over twelve types of sealing machines, selection depends on production requirements and type of glass used.

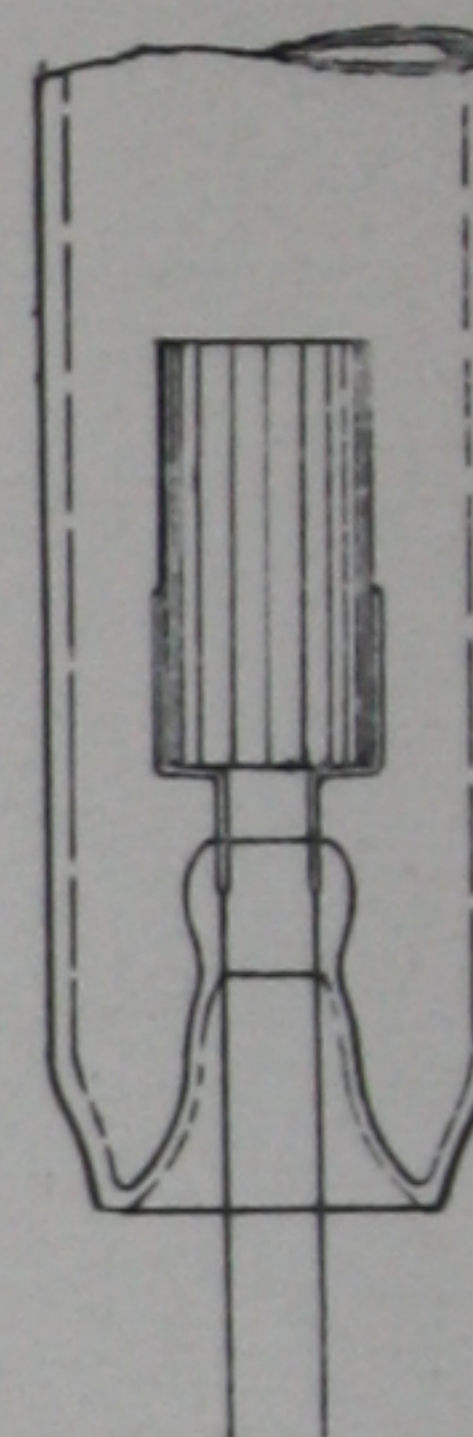
A FEW OF THE HEAVY TYPE SEALING MACHINES WE MANUFACTURE Made Automatic And Hand-Operated

SIX HEAD AUTOMATIC SEALING MACHINE

BEFORE



AFTER

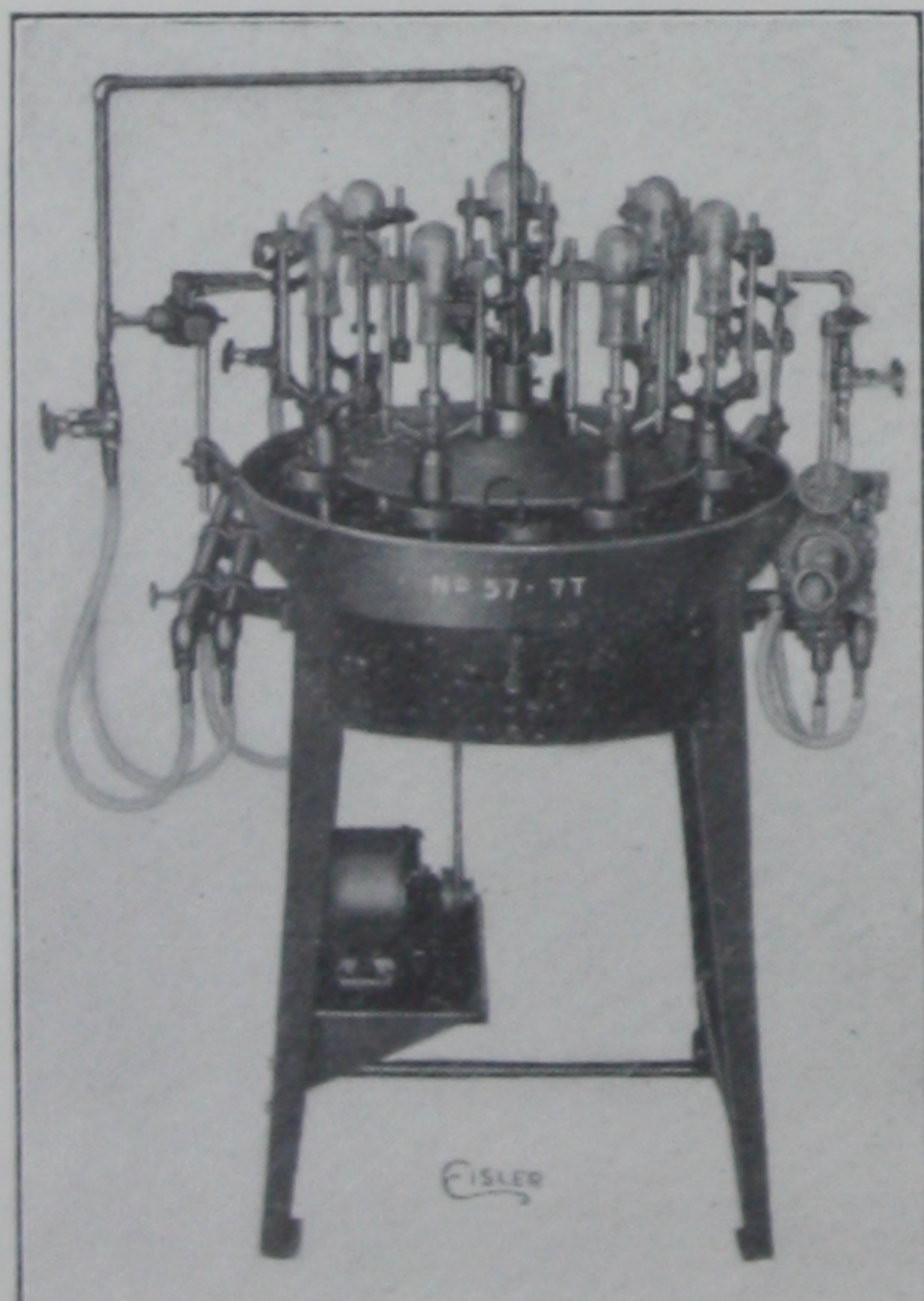


Machine No. 57-BT

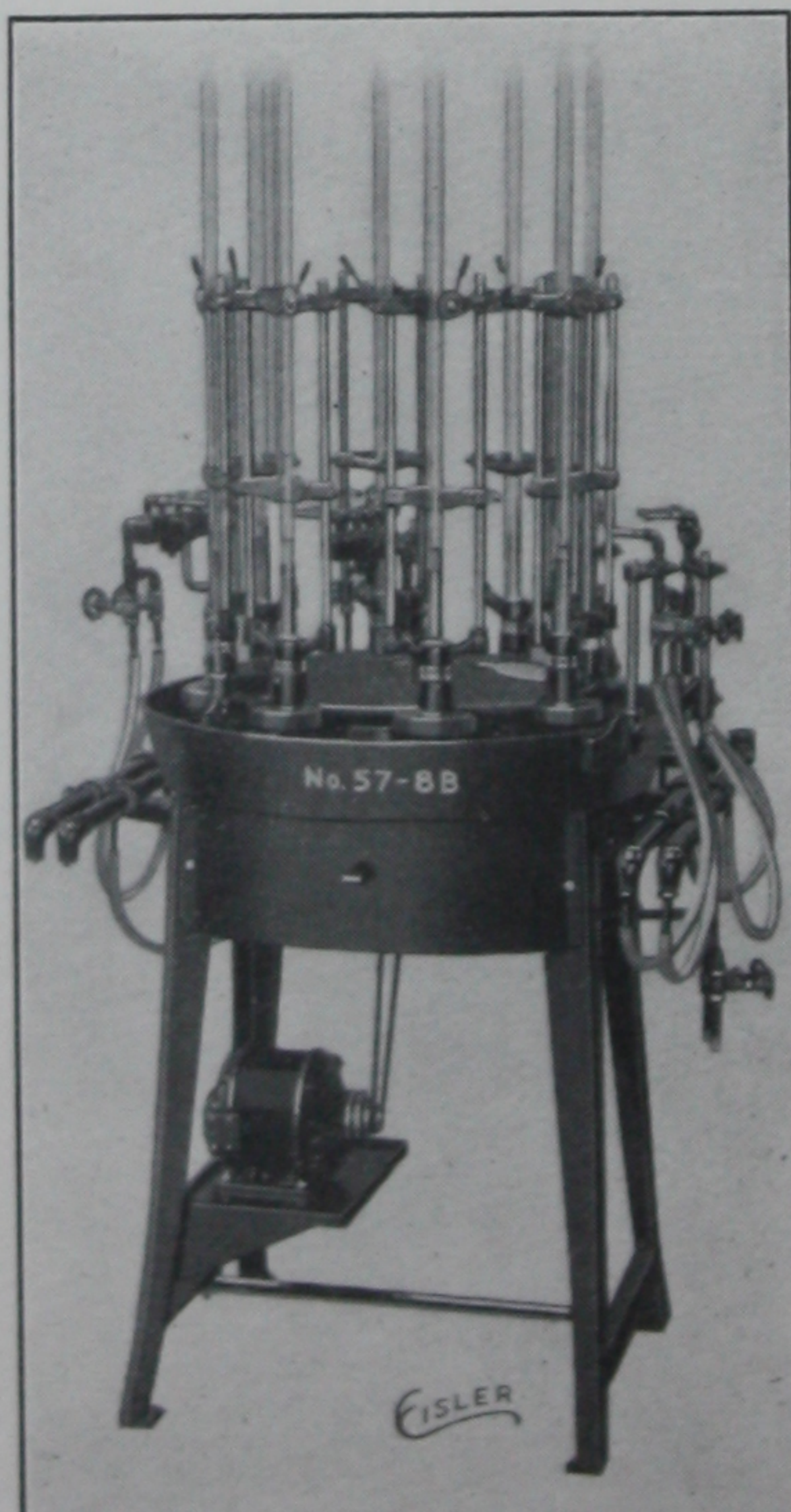
WHEN ORDERING MACHINE SPECIFY KIND OF GLASS TO BE USED

EIGHT HEAD AUTOMATIC Special for long tubes

SEVEN HEAD AUTOMATIC

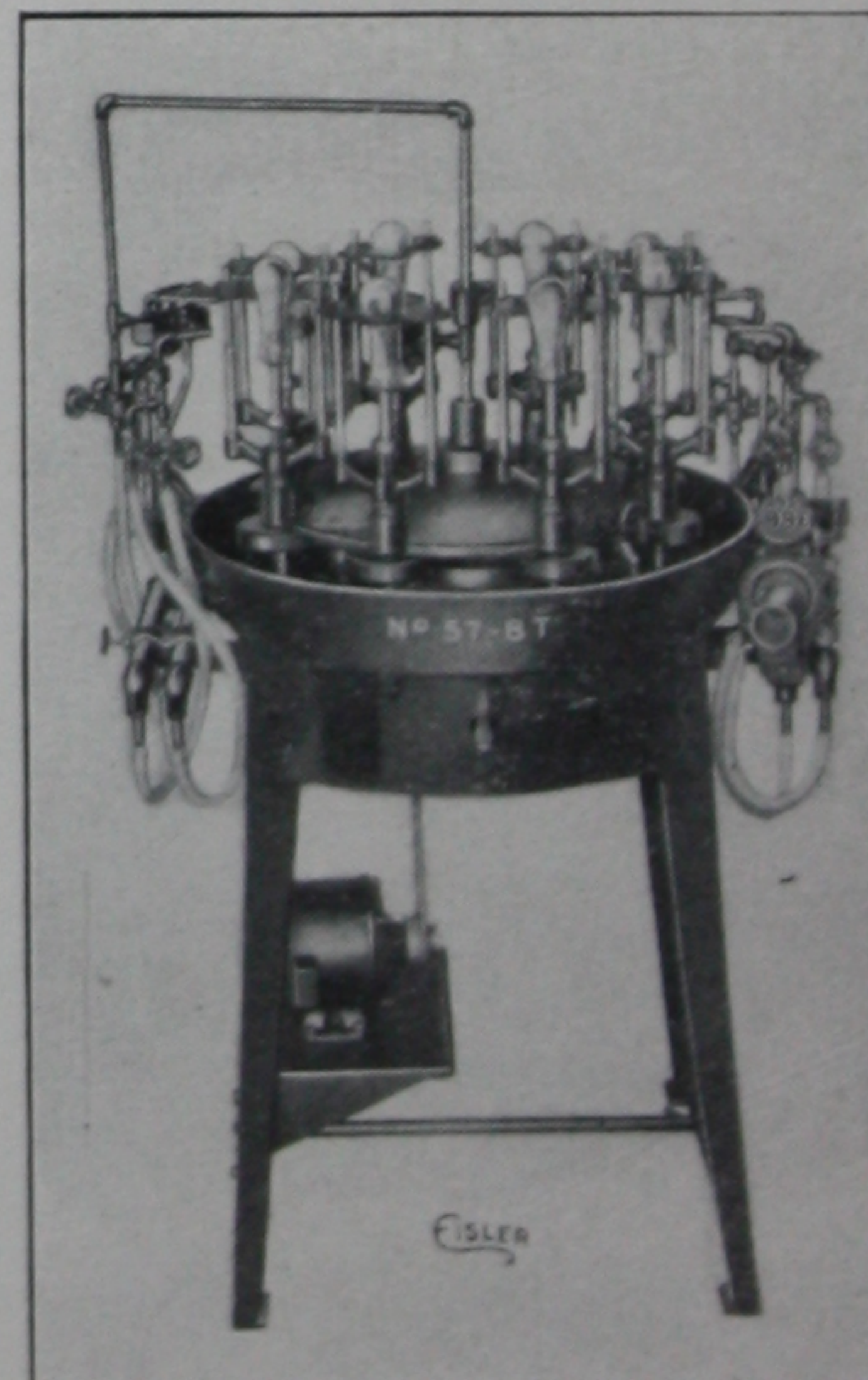


Machine No. 57-7T



Machine No. 57-8B

EIGHT HEAD AUTOMATIC

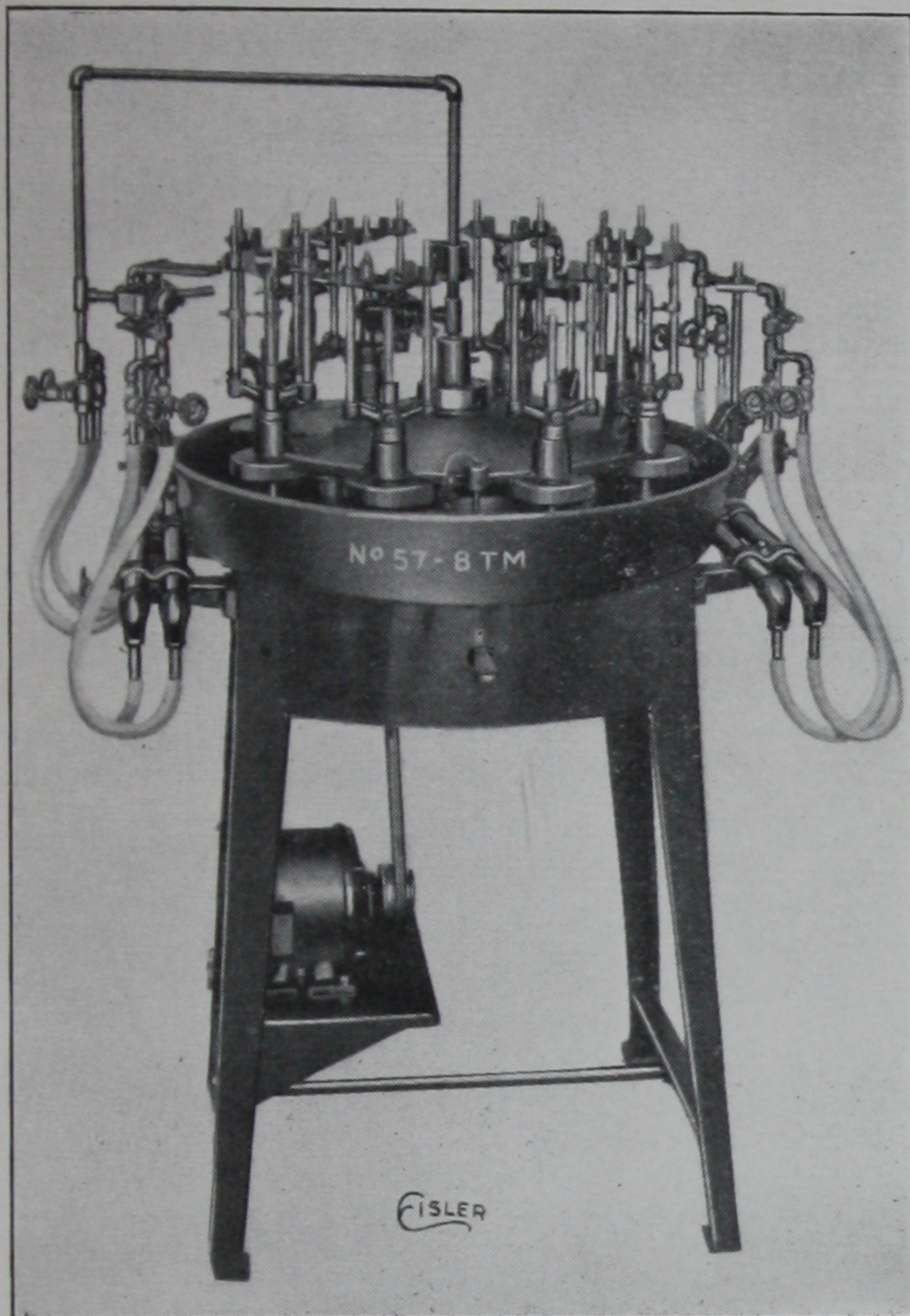


Machine No. 57-8T

SEALING MACHINES

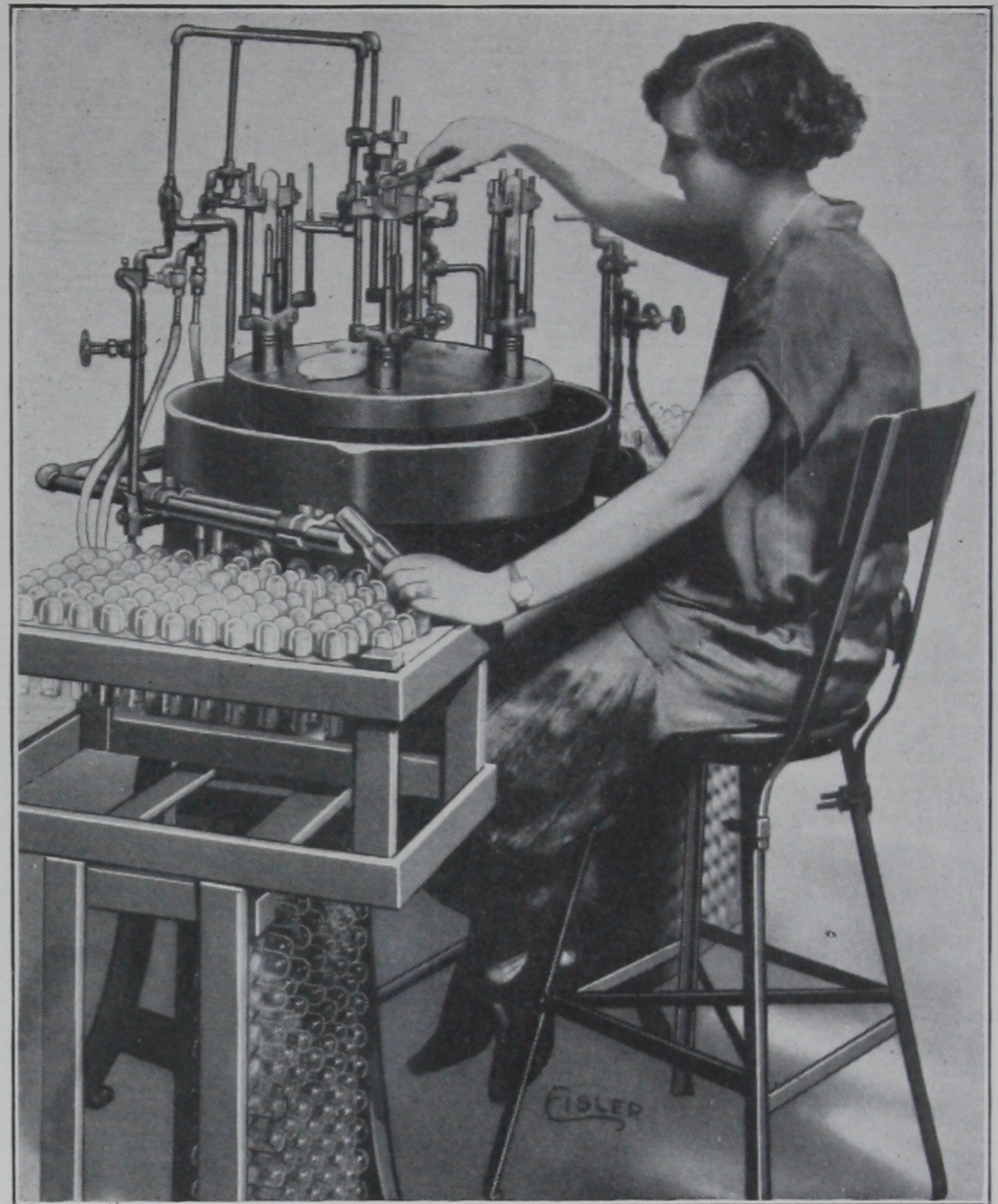
A FEW OF THE LIGHT TYPE SEALING MACHINES
Made Automatic and Hand Operated

EIGHT HEAD AUTOMATIC



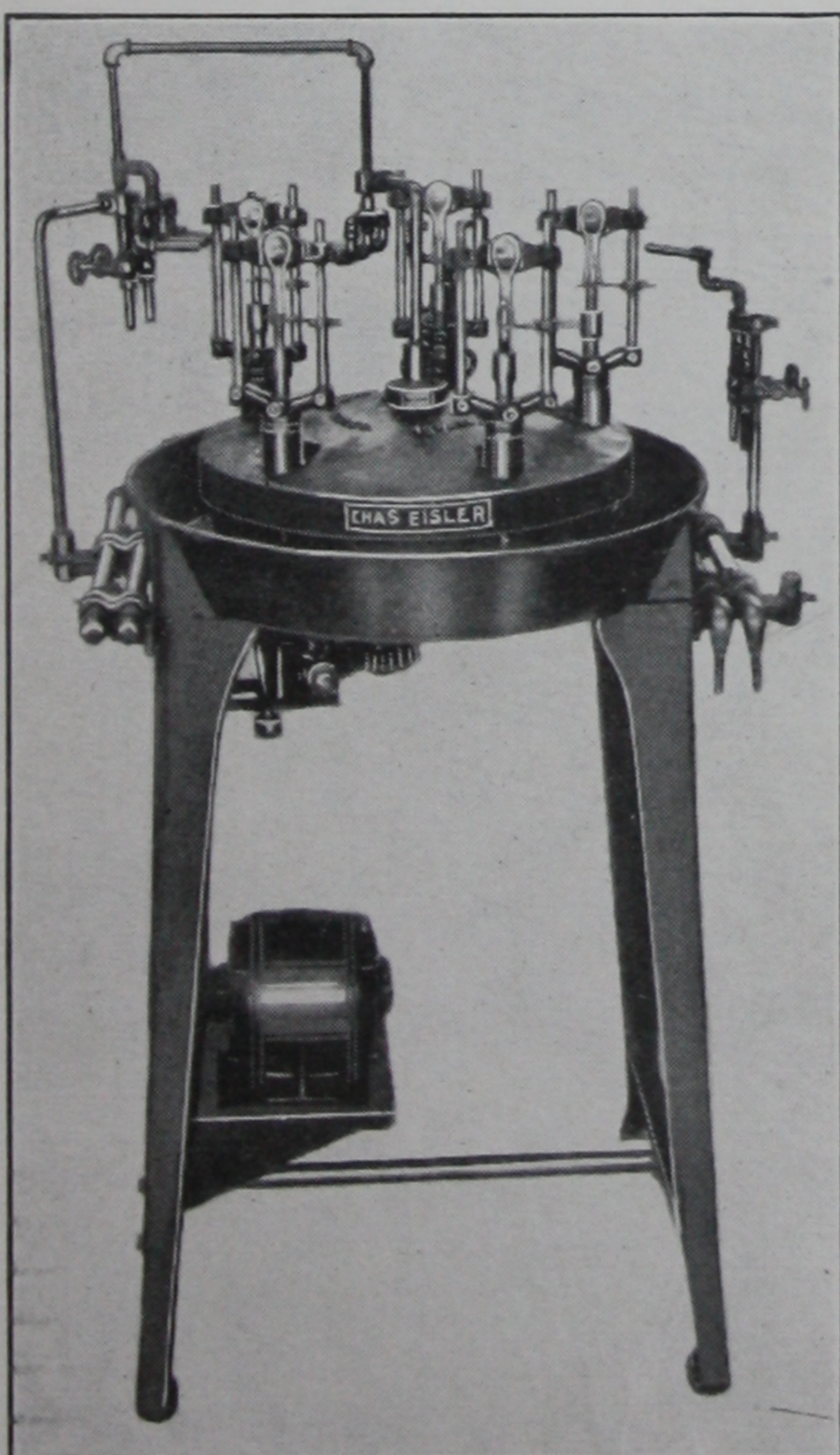
Machine No. 57-8TM

SIX HEAD AUTOMATIC LIGHT TYPE



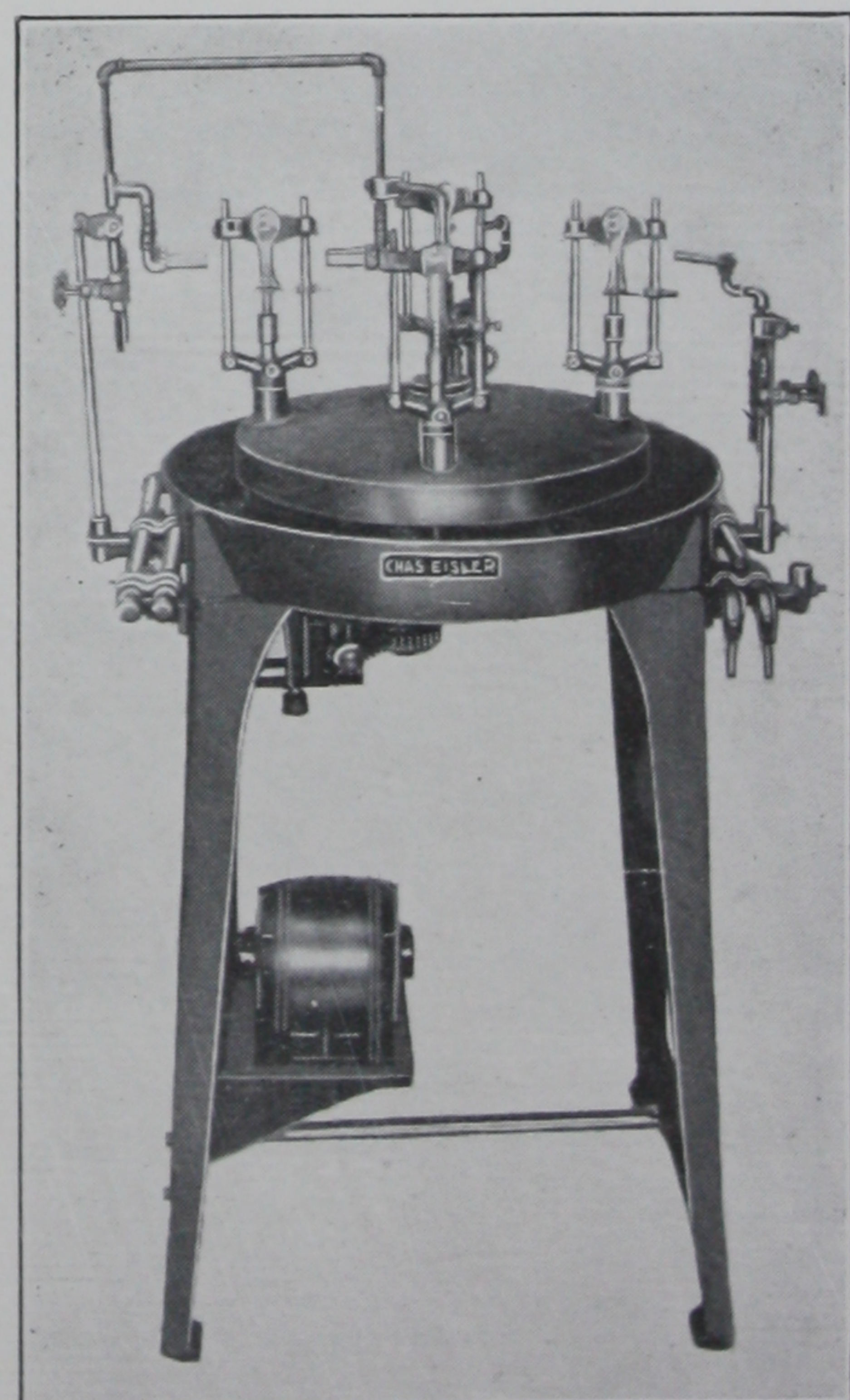
Machine No. 54-6T

FIVE HEAD HAND OPERATED LIGHT TYPE



Machine No. 54-5

FOUR HEAD HAND OPERATED LIGHT TYPE

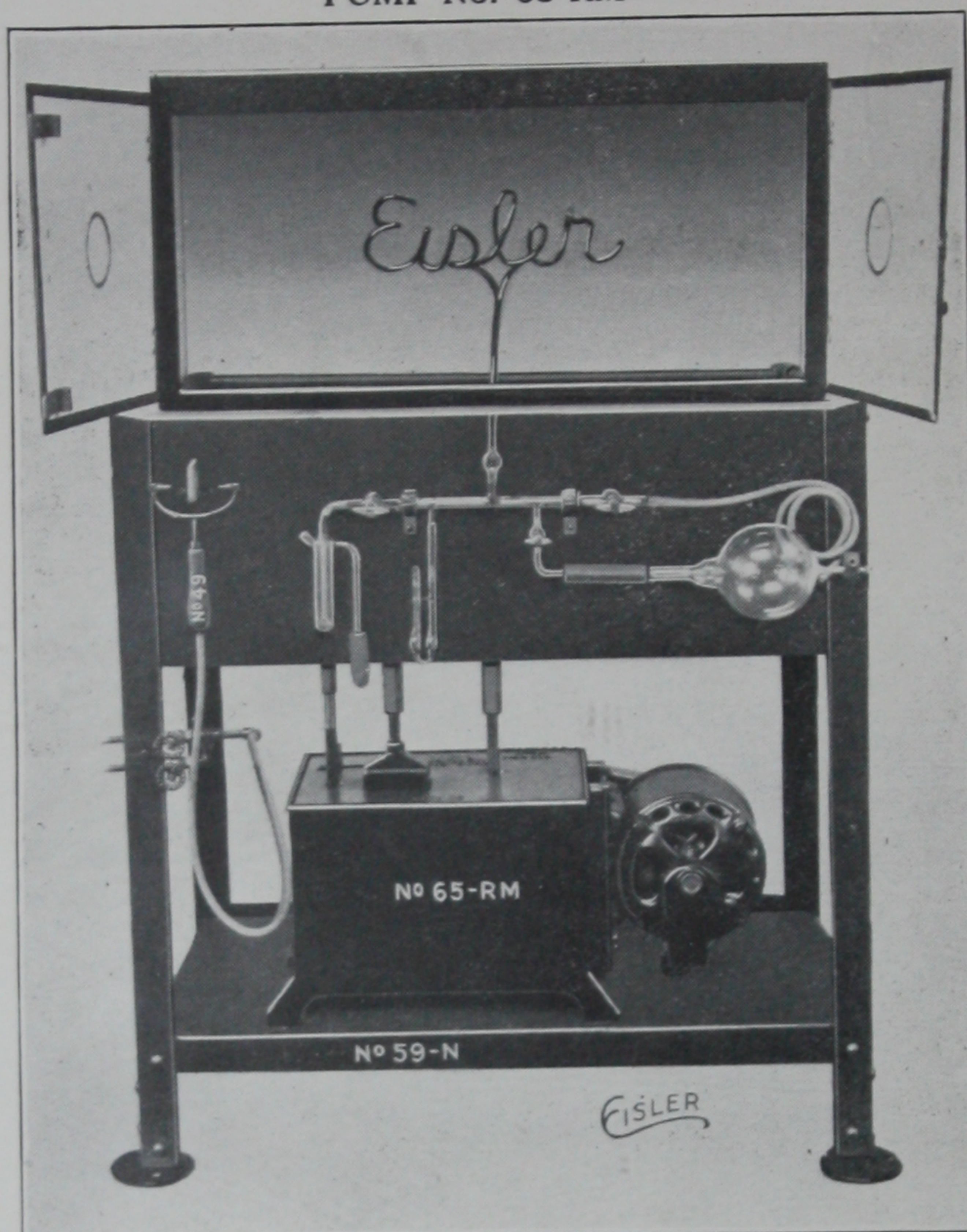


Machine No. 54-4

EXHAUSTING

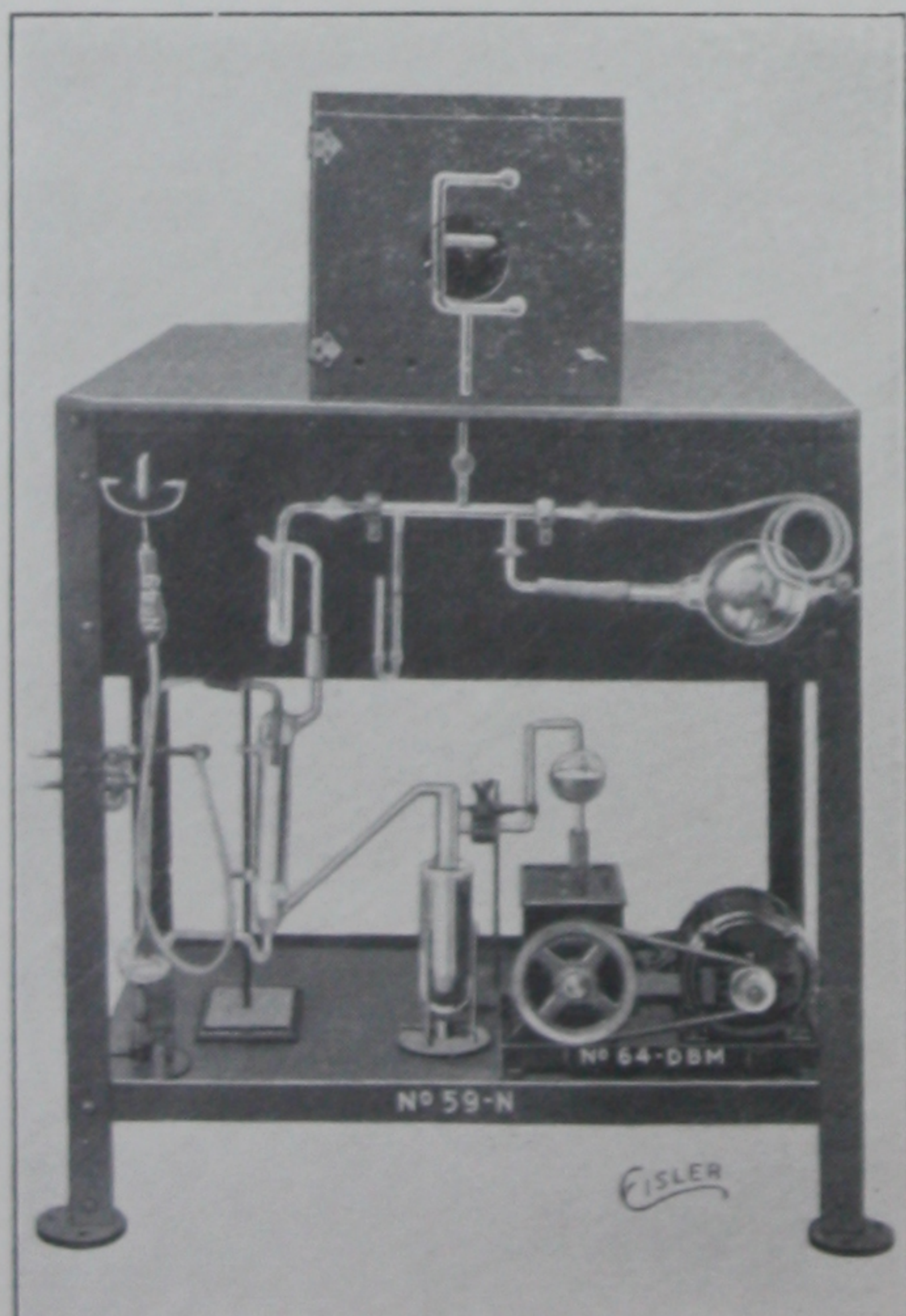
Exhausting is considered the most important operation in the construction of the neon tube. The highest degree of vacuum must be obtained for the proper functioning of the neon tube. The best of equipment is very essential. Our Exhaust Position and High Vacuum Pumps are highly recommended by the most prominent neon sign tube manufacturers.

NEON TUBE EXHAUSTER WITH OUR LATEST
COMBINATION STANDARD "HIGH VACUUM"
PUMP No. 65-RM



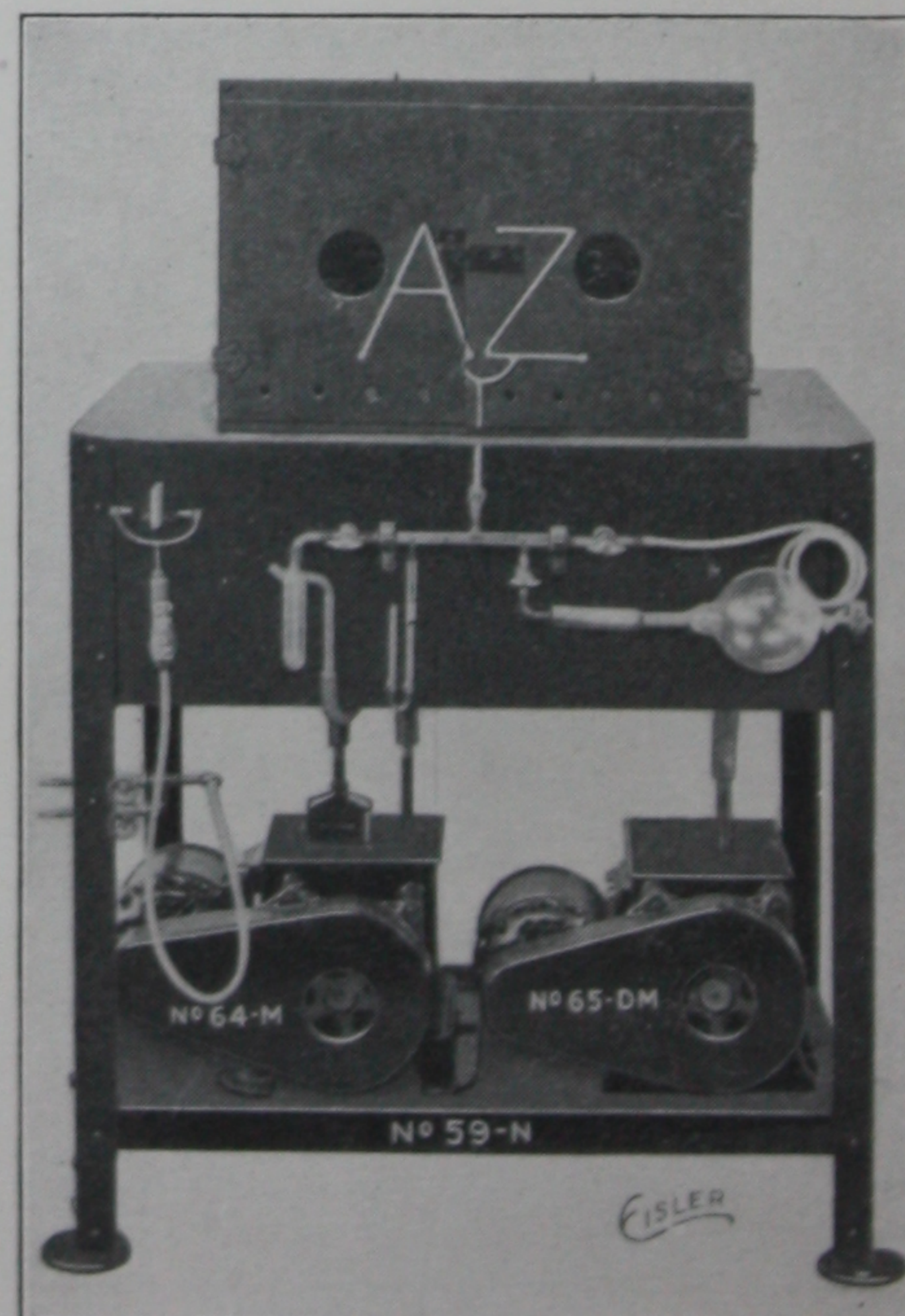
Machine No. 59-N, Arrangement 1

EXHAUSTER WITH OUR MERCURY ASPIRATOR
No. 155 AND MIDGET "HIGH VACUUM"
PUMP No. 64-DBM



Machine No. 59-N, Arrangement 2

EXHAUSTER WITH OUR "HIGH VACUUM"
PUMPS No. 64-M AND No. 65-DM



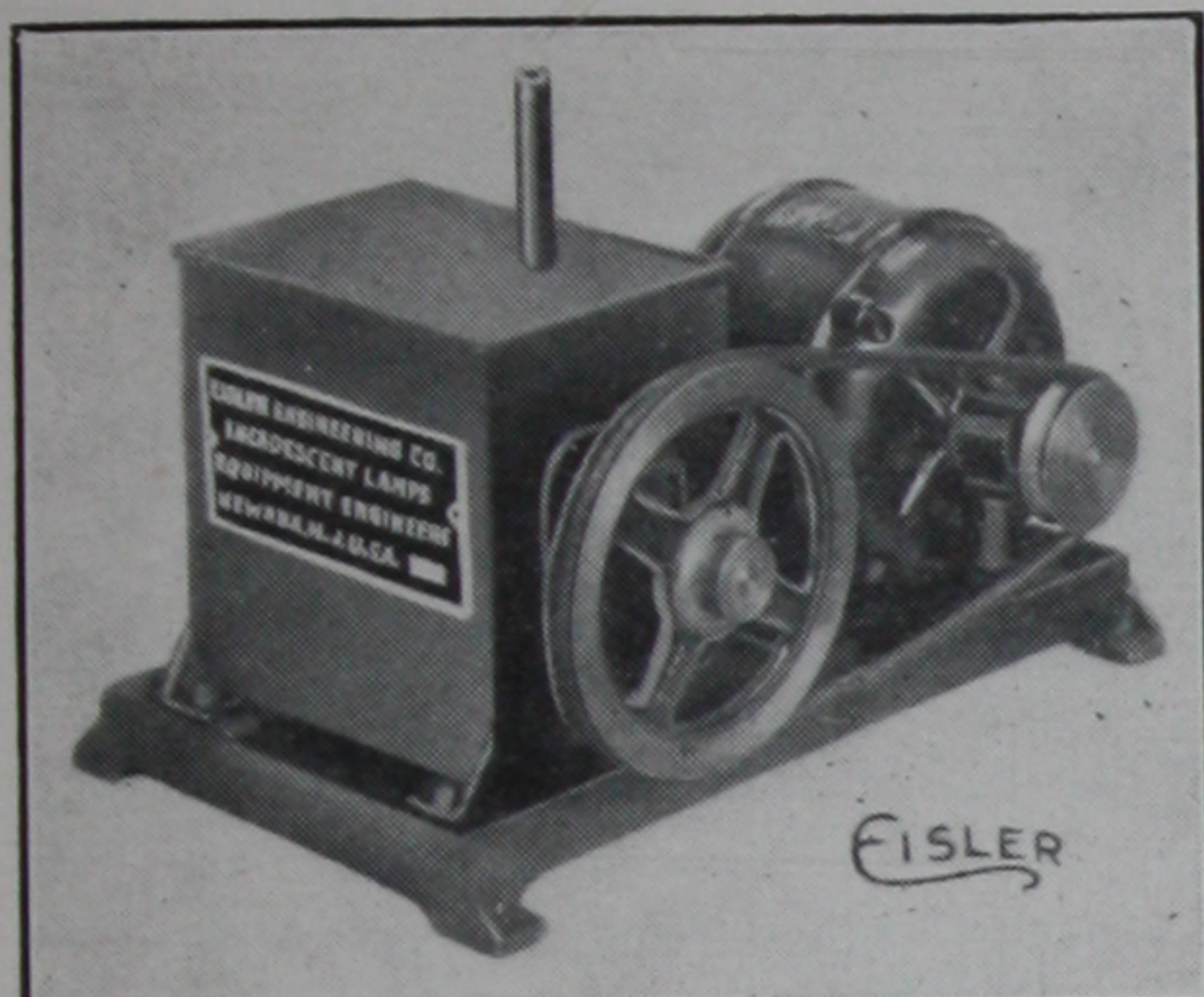
Machine No. 59-N, Arrangement 3

HIGH VACUUM PUMPS—OIL SEALED

It is very important that the best type of High Vacuum Pumps be employed for the successful manufacture of Neon Tubes. The Eisler "High Vacuum" Pumps are being extensively used, and are standard equipment for the most prominent neon sign makers. We are only showing a few of the many "High Vacuum" pumps which we manufacture.

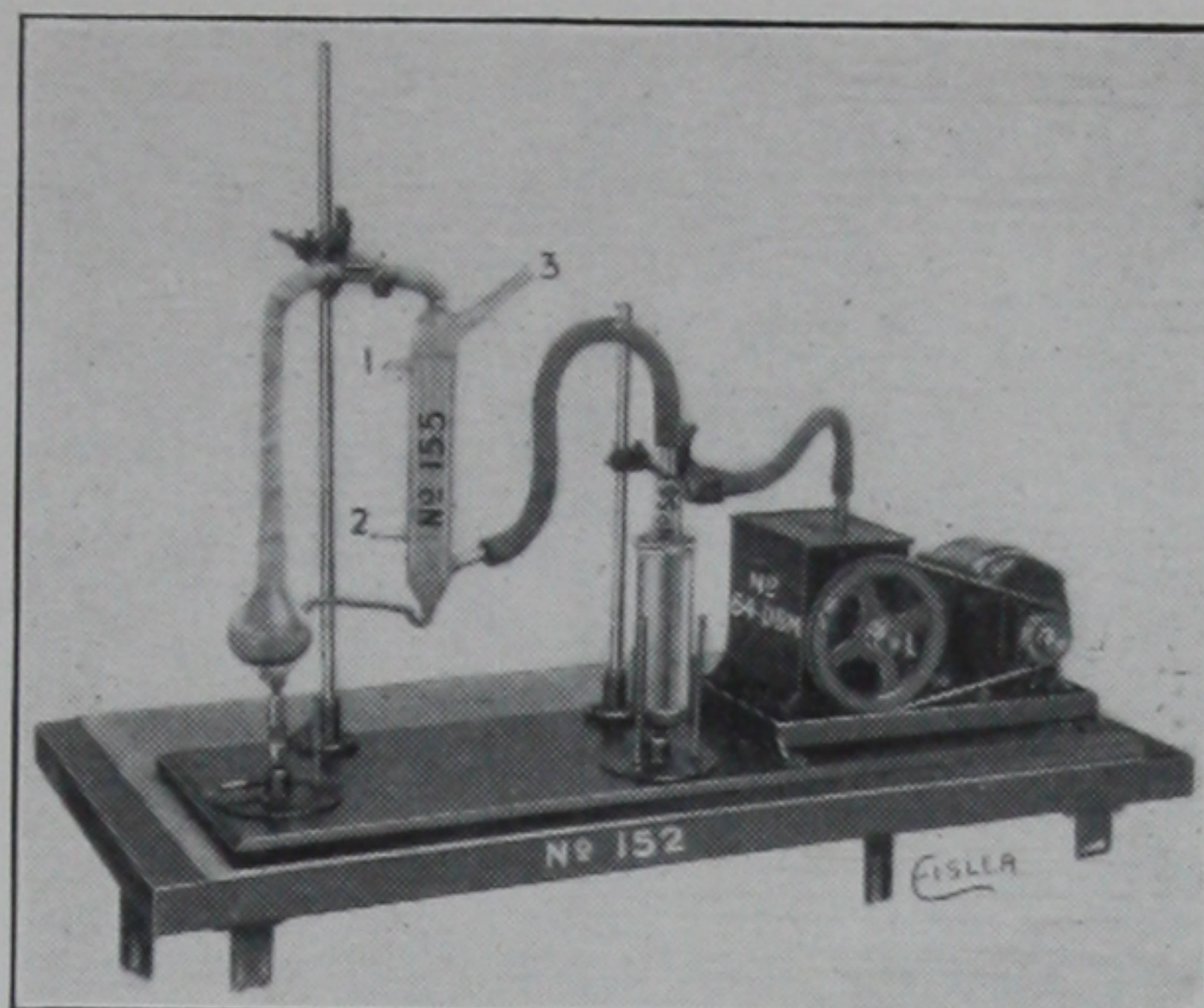
The final vacuum reading attainable is 0.00005 millimeter of mercury, McLeod gauge reading.

MIDGET "HIGH VACUUM" PUMP
Compound — Motor Drive



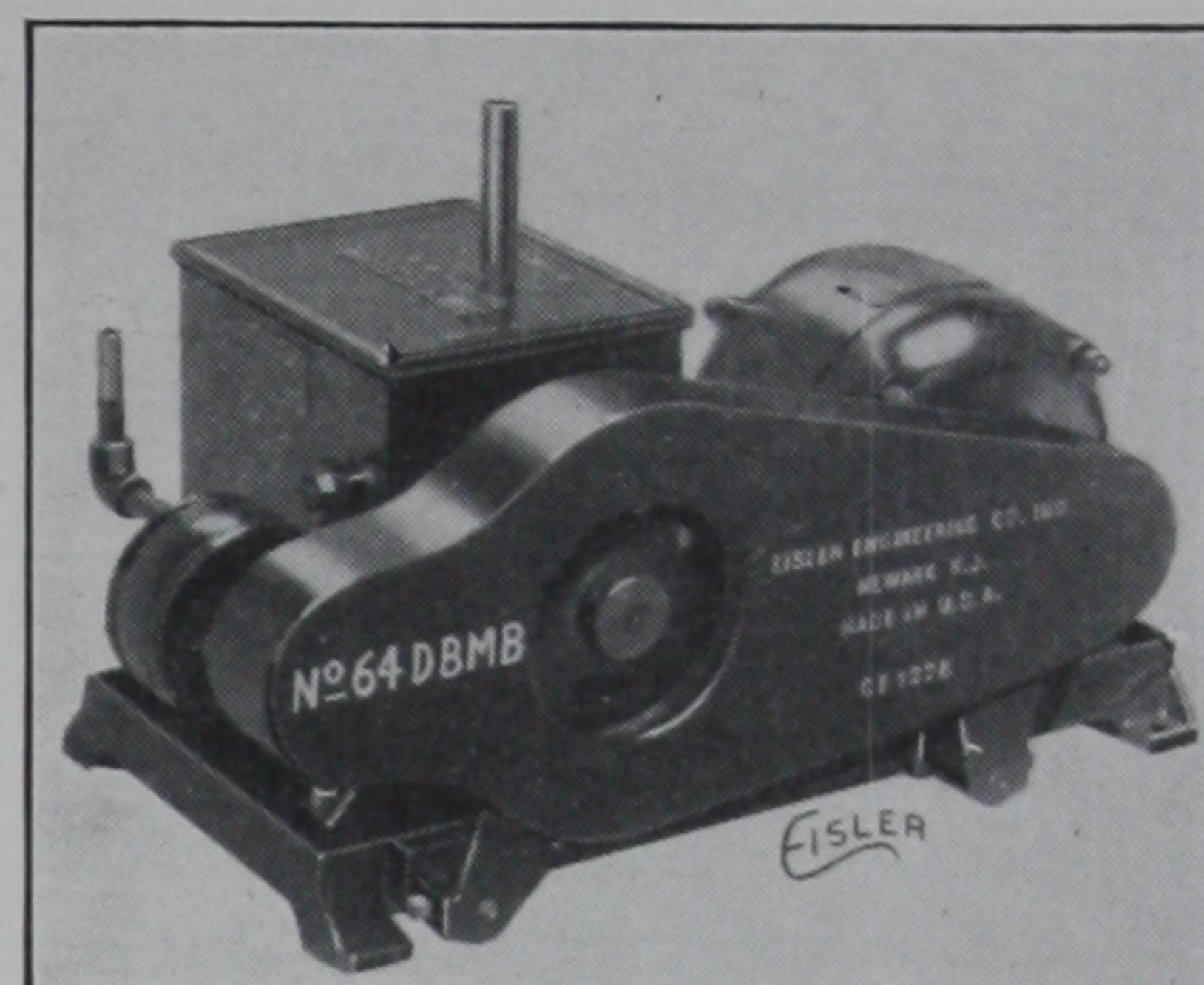
Machine No. 64-DBM

MIDGET COMPOUND PUMP
With Mercury Aspirator



Machine No. 64-DBM, & No. 155

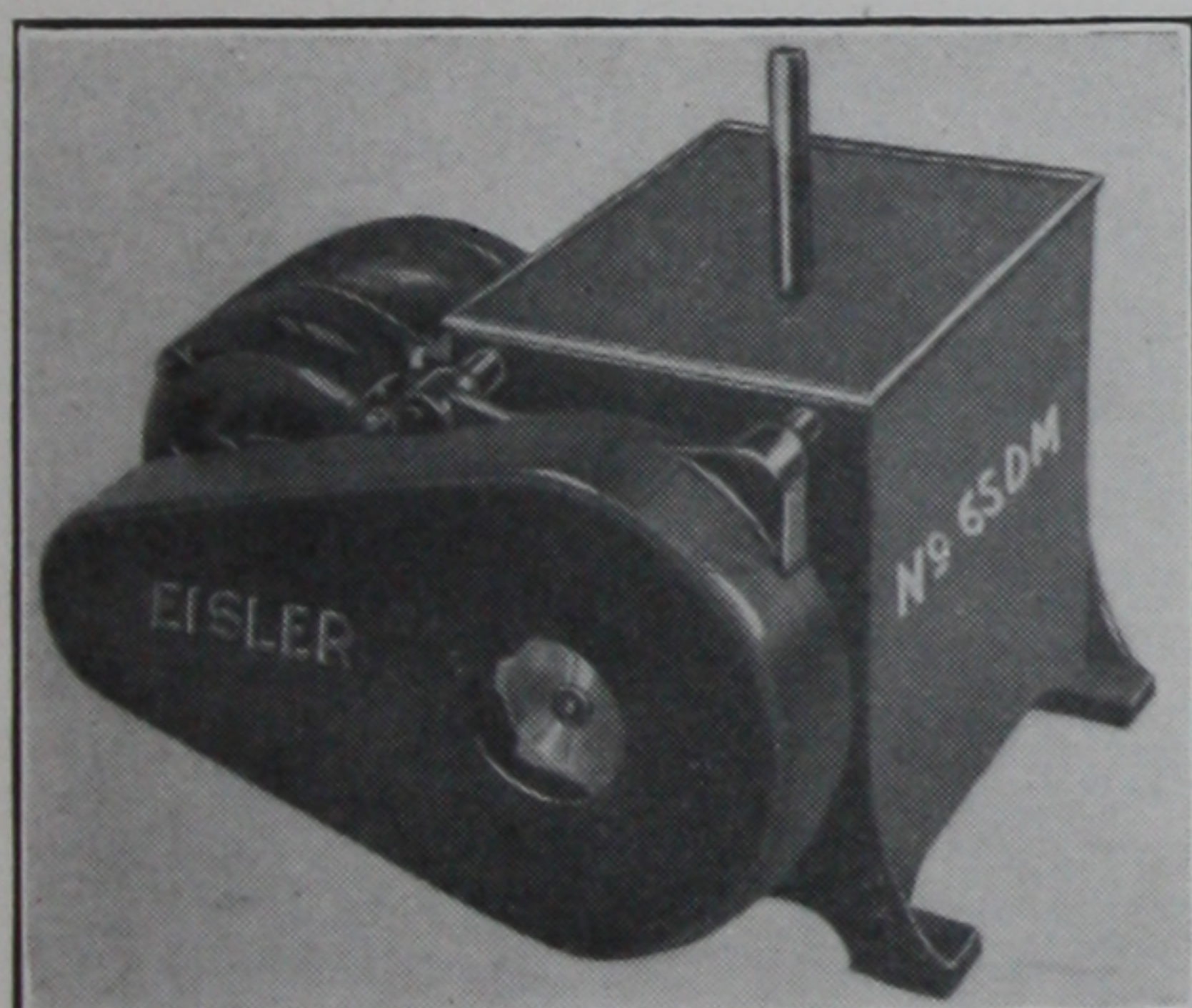
MIDGET COMPOUND PUMP
With small blower



Machine No. 64-DBMB

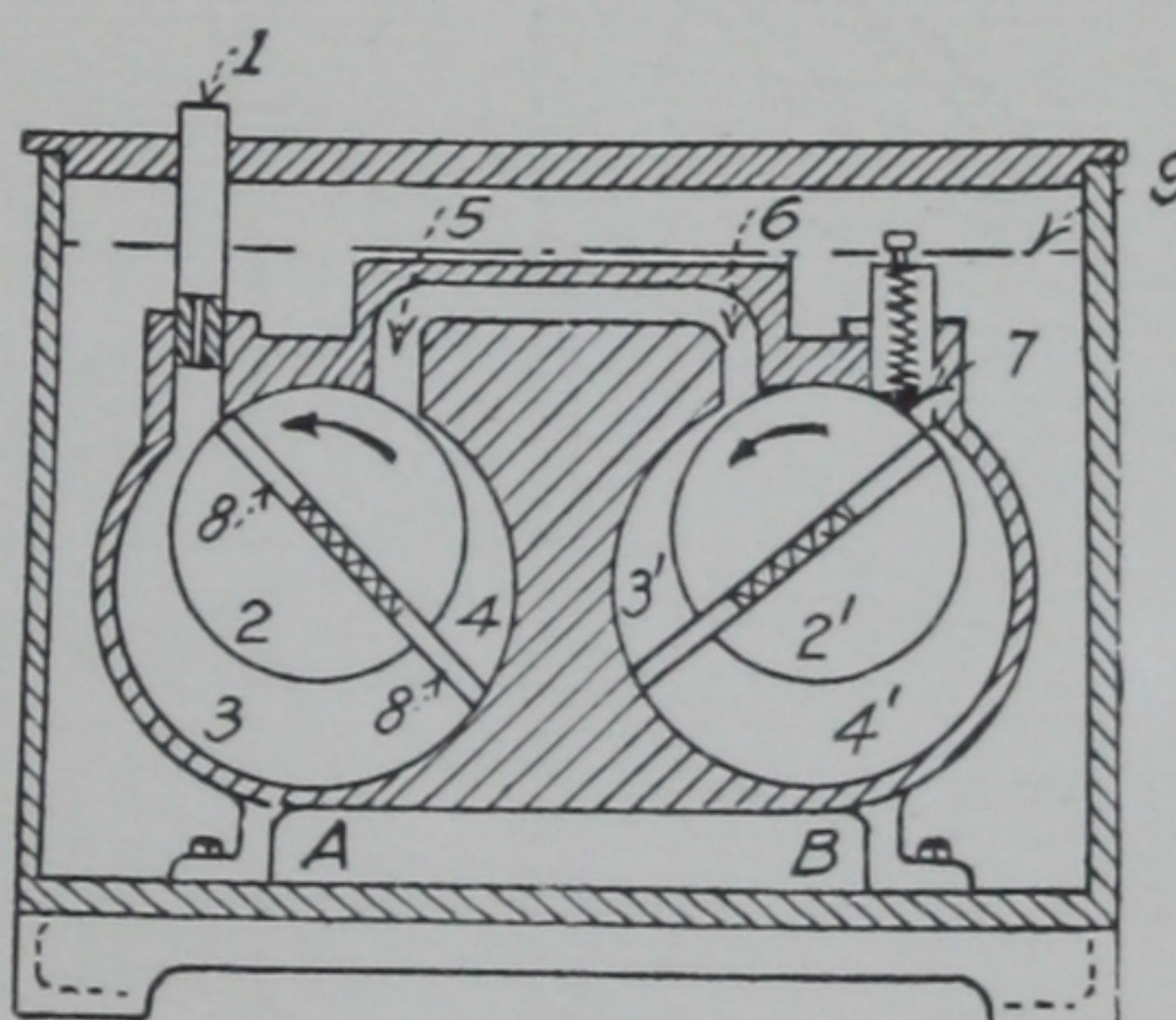
EISLER "HIGH VACUUM" PUMPS are standard the world over — ask the man who has them
OVER FIVE THOUSAND IN USE.

STANDARD "HIGH VACUUM" PUMP
Compound — Motor Drive



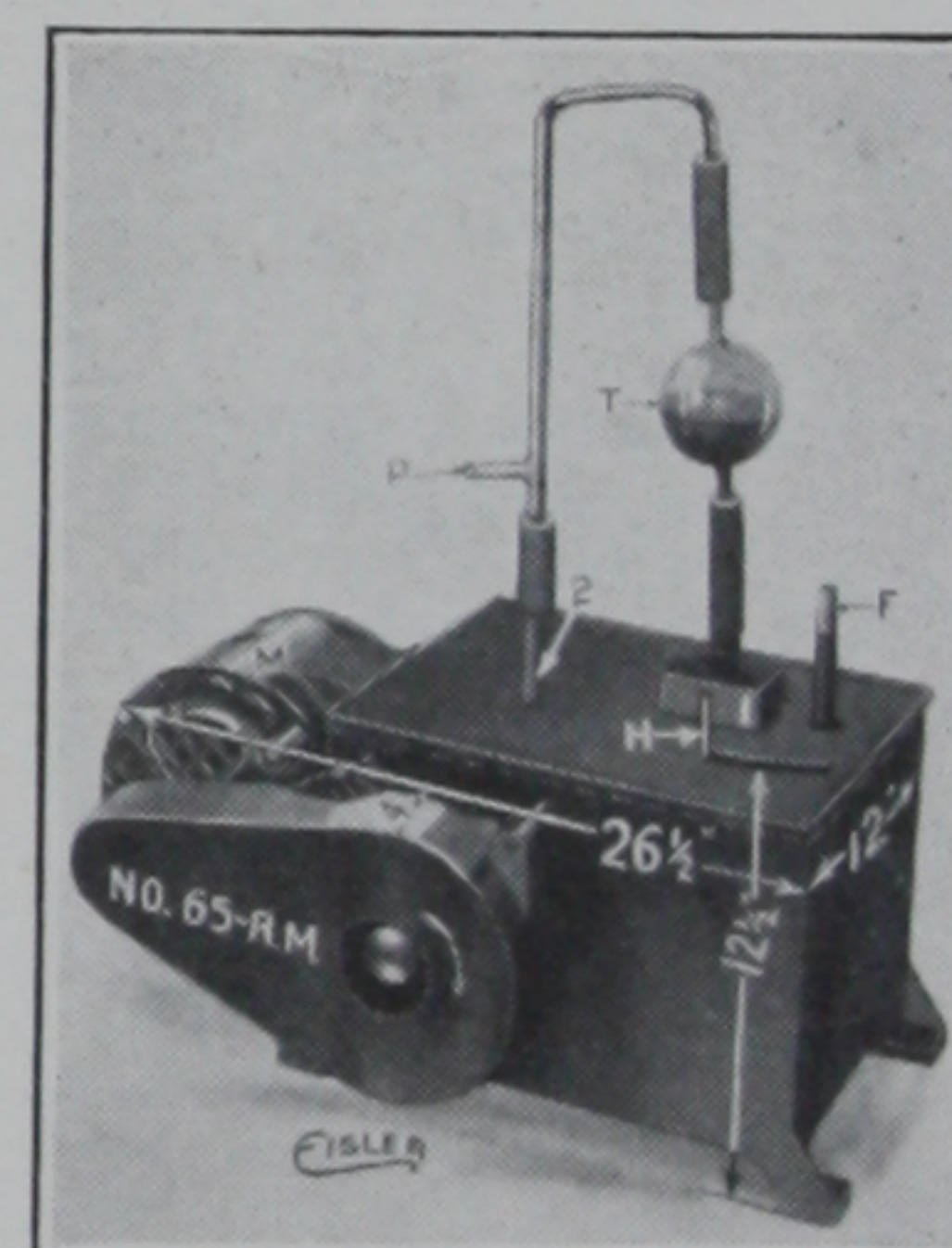
Machine No. 65-D

CROSS SECTION
Compound Vacuum Pump



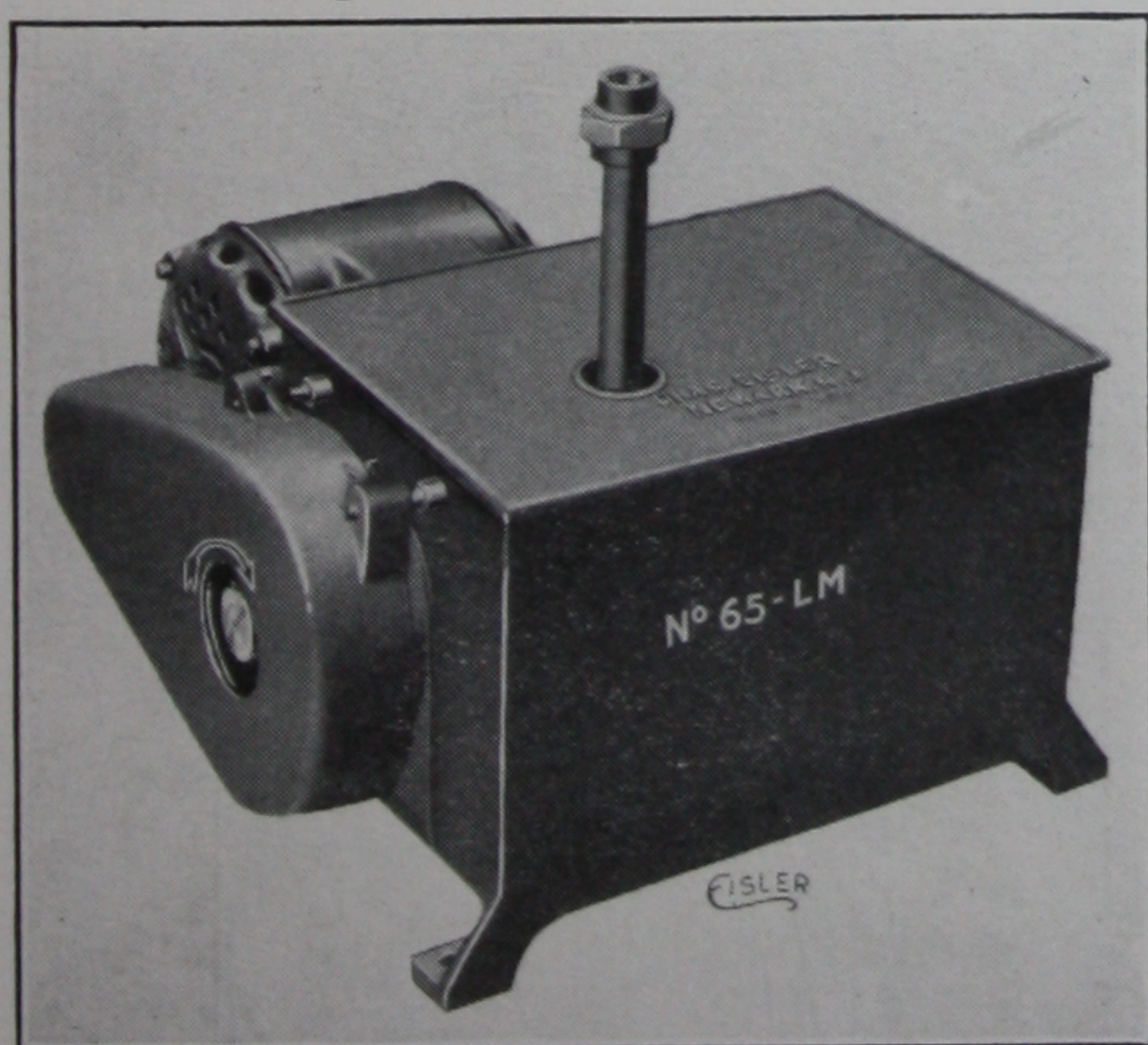
Diagram

STANDARD "HIGH VACUUM" PUMP
Combination — Motor Drive



Machine No. 65-RM

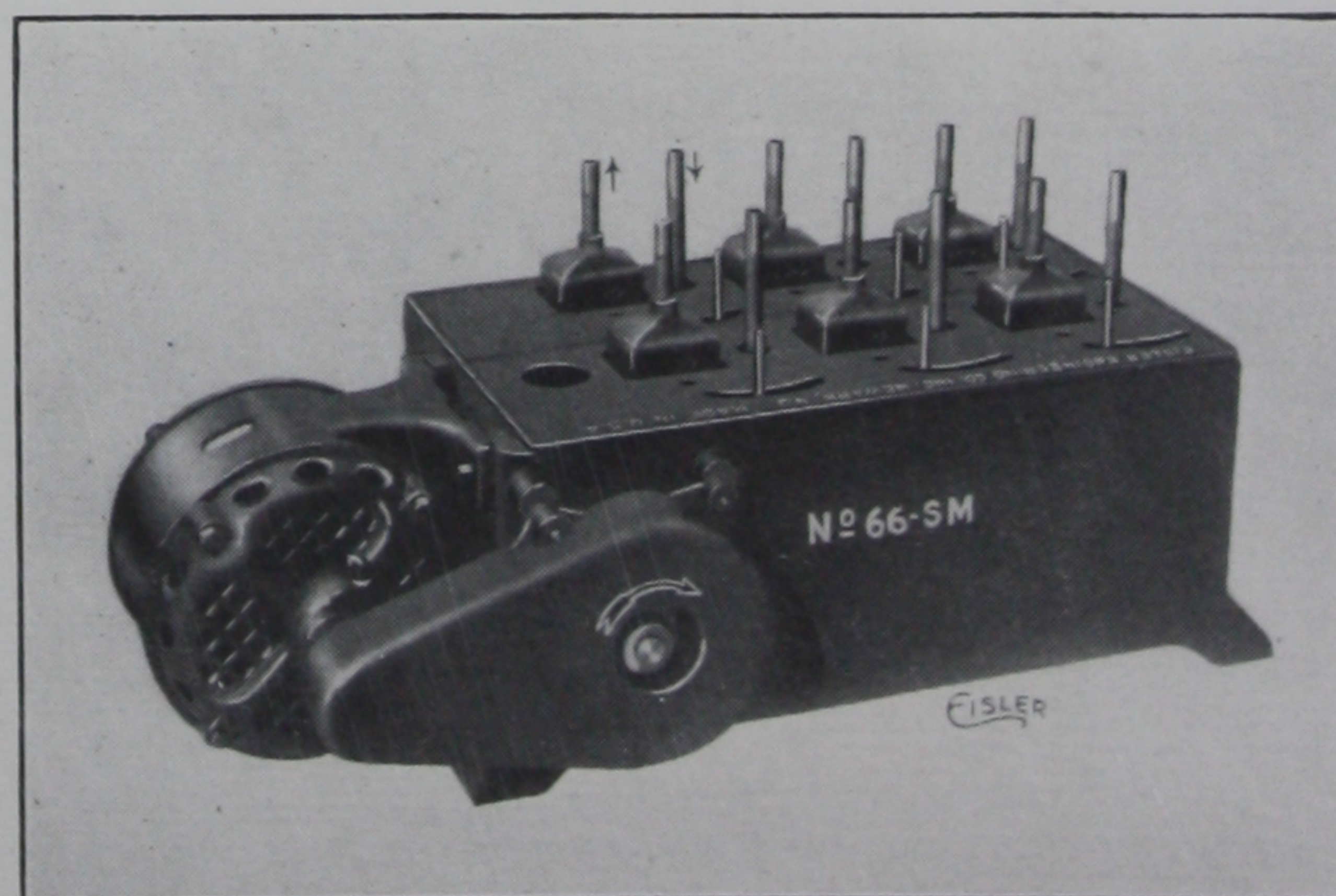
SUPER COMPOUND "HIGH VACUUM" PUMP
Used for preliminary and backing a
large number of pumps.



Pump No. 65-LM.

STANDARD SIX STAGE "HIGH VACUUM" PUMP

This pump can be used for a series of
exhaust positions.



Pump No. 66-SM

HIGH FREQUENCY APPARATUS

BOMBARDING is the term used for heating the elements of the neon tube. The internal heating of the element is accomplished by high frequency, no wires are connected to the tube. A coil such as No. 7 or 8 as shown in the illustration is placed over the tube. This heating is accomplished in a short time, depending on the size of the electrode. This operation is performed during exhausting. The heating of the element liberates all its impurities, which are removed by the vacuum apparatus.

VERY LATEST GAP TYPE BOMBARDER



Machine No. 119-RA

Some of the interesting features of our external High Frequency Bombarding Machines:

Consumption, $1\frac{1}{4}$ K. W.

Voltage, from 100 to 240 volts.

Cycles, from 25 to 60 cycles.

Standard stock sizes are 110 or 220 volts, 60 cycles.

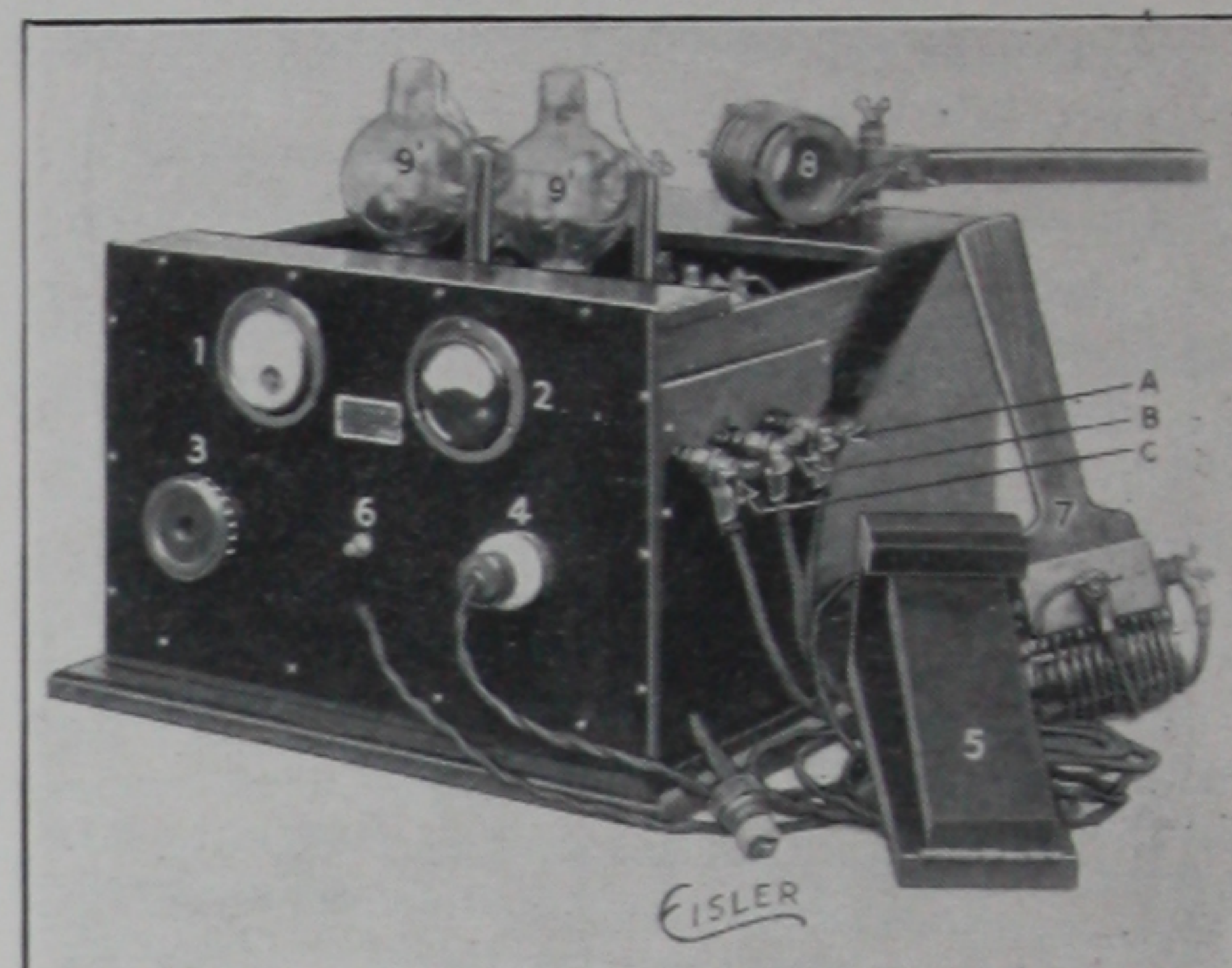
All other cycles and voltages are made up special, and will cause a little delay in shipping.

This Bombarder will bombard any tube from 5 to 8 seconds, according to the construction of the tube.

The apparatus is equipped with 2 sets of gaps as shown at 6. Reserve gaps can be put in operation without loss of time with lever 5.

It is very advisable to use this apparatus where power tubes are not readily available. This machine is adaptable for ex-ray tubes and thermos bottles, and etc.

TWO TUBE BOMBARDER



Machine No. 119-R

1. Filament voltmeter for reading filament volts of tubes 9.

2. High frequency meter for determining when the outfit is functioning properly.

3. Filament rheostat for controlling voltage to tubes No. 9.

4. Attachment plug and cord for foot switch No. 5.

5. Foot switch to throw current on to bombarder.

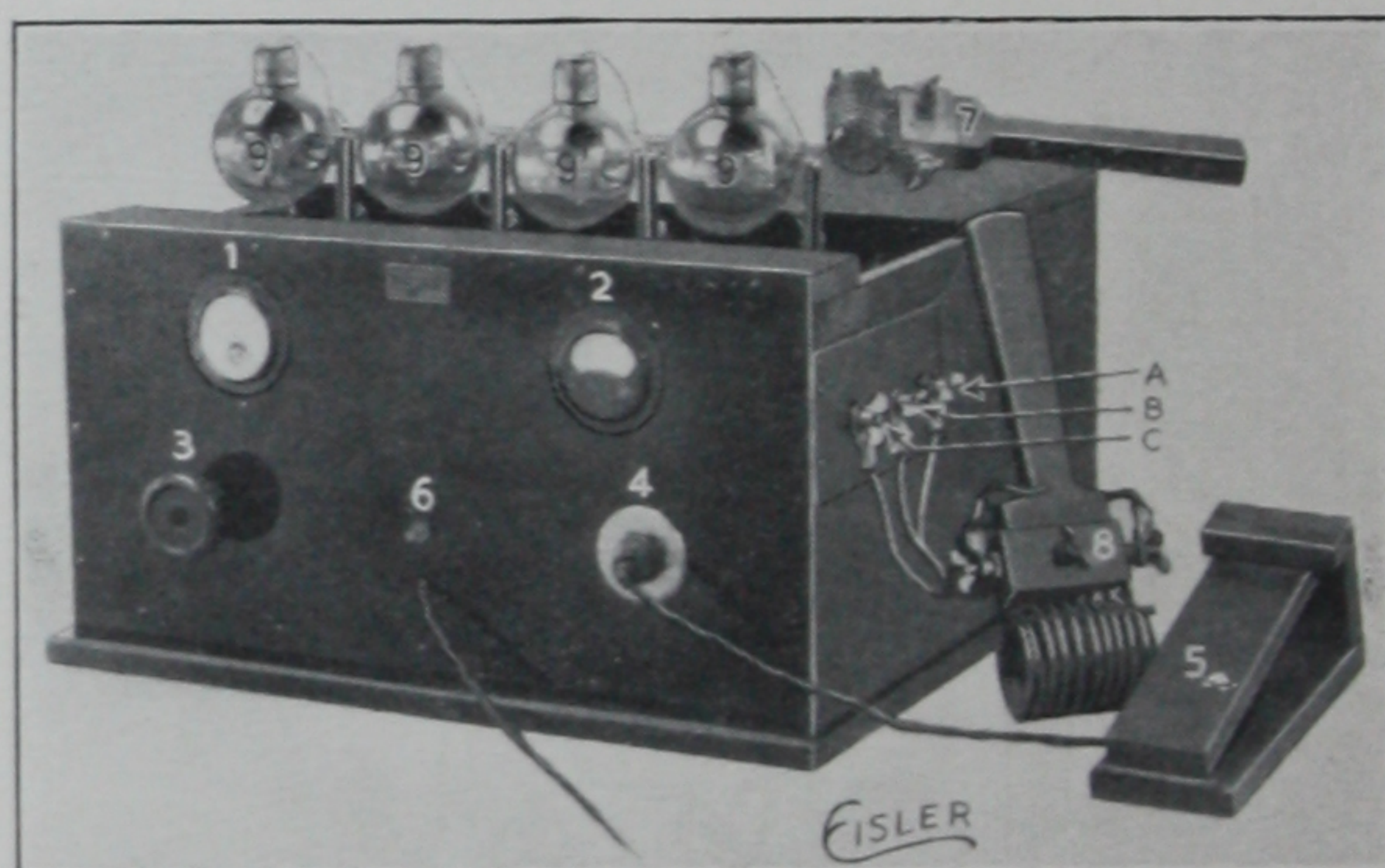
6. Push and pull switch performs the same functions as No. 5.

7. Bombarder coil

8. Bombarder coil. 9. 75 Watt power tubes.

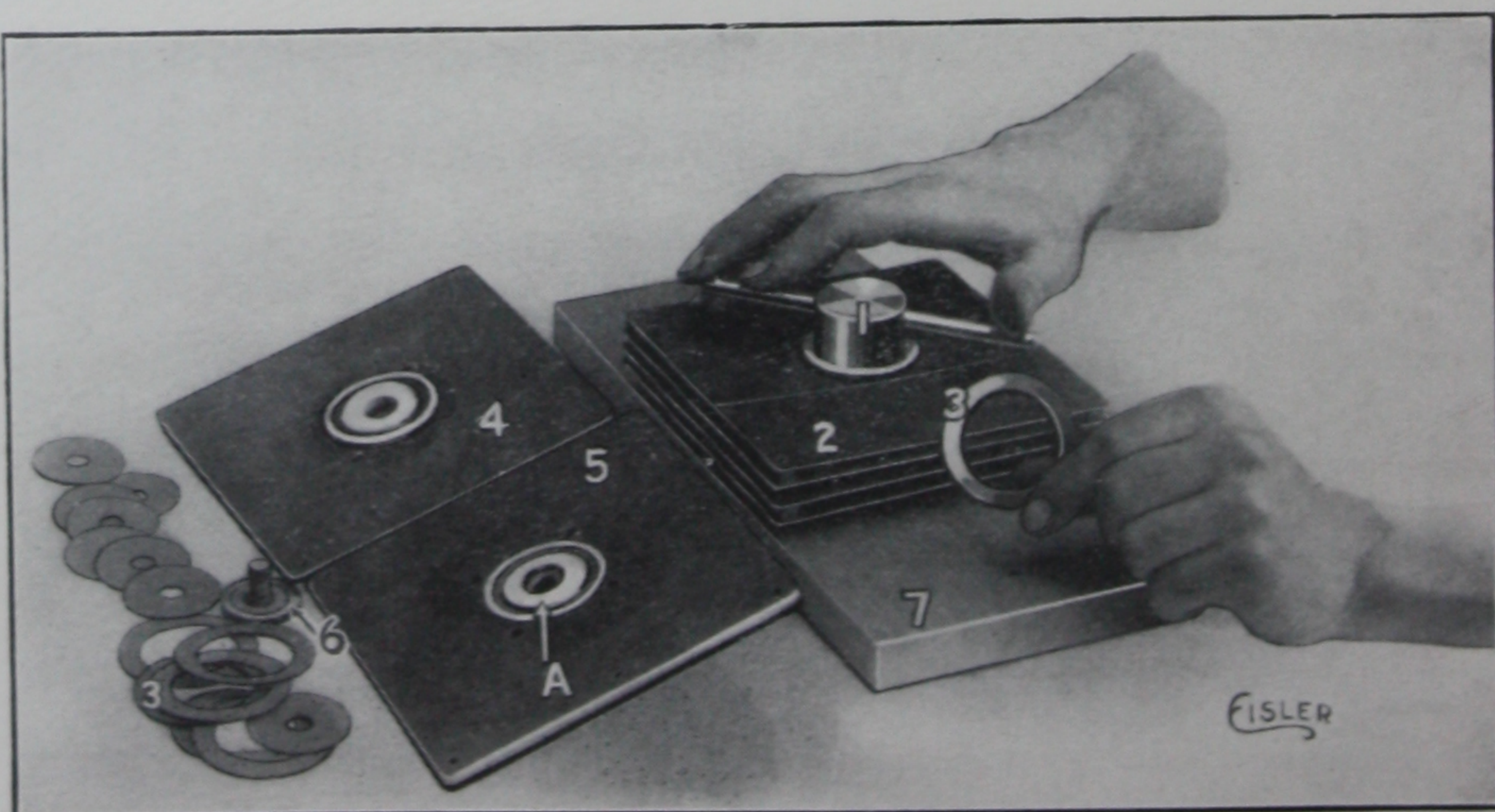
A, B and C—Connection terminals for connecting either coil 8 or coil 7 to bombarder.

FOUR TUBE BOMBARDER



Machine No. 119-R4

SHOWING ASSEMBLY OF GAPS AND WASHERS



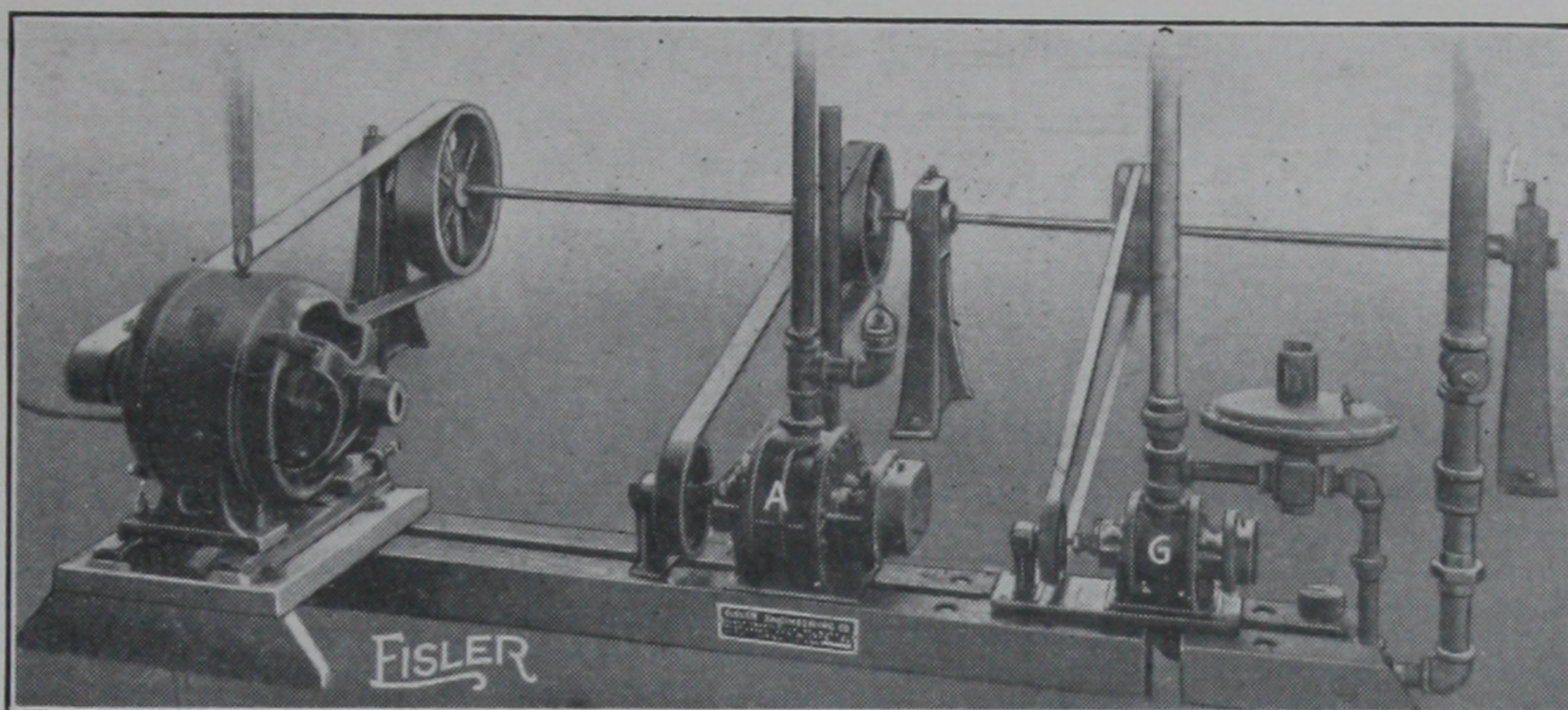
GAPS — Part of Machine No. 119-RA

GAS AND AIR PRESSURES

The success of your production depends on the proper selection, types and sizes of your Power House Equipment. The most important is the proper ratio or pressure of Gas and Air. Let EISLER advise you what sizes and types you should have for your factory. "It will pay you."

AIR PRESSURE BLOWER, GAS BOOSTER & REGULATOR

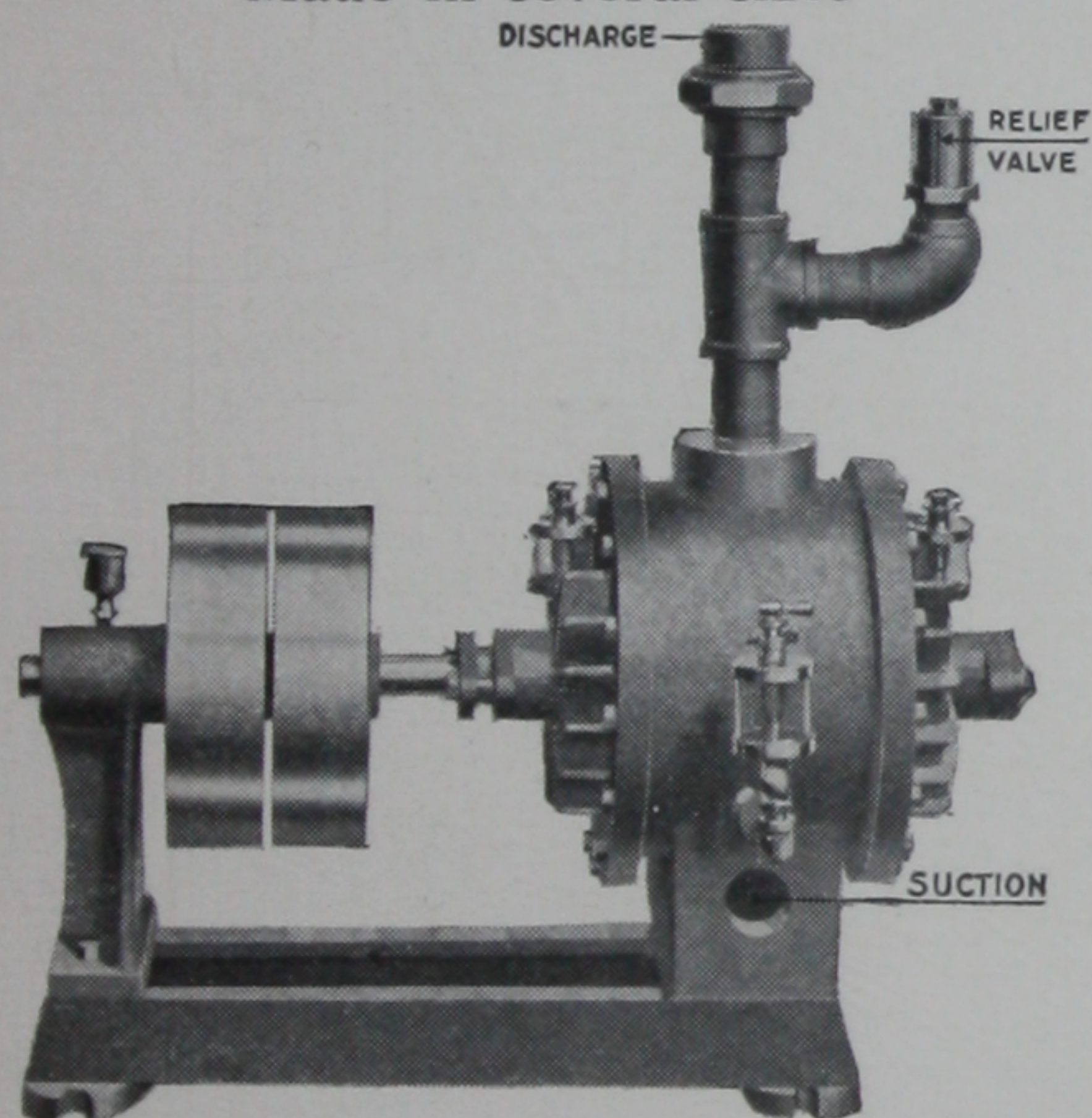
A Air Pressure, G Gas Booster and Regulator
Practical Installation



GAS BOOSTER AND AIR PRESSURE BLOWER

SILENT TYPE AIR PRESSURE BLOWER

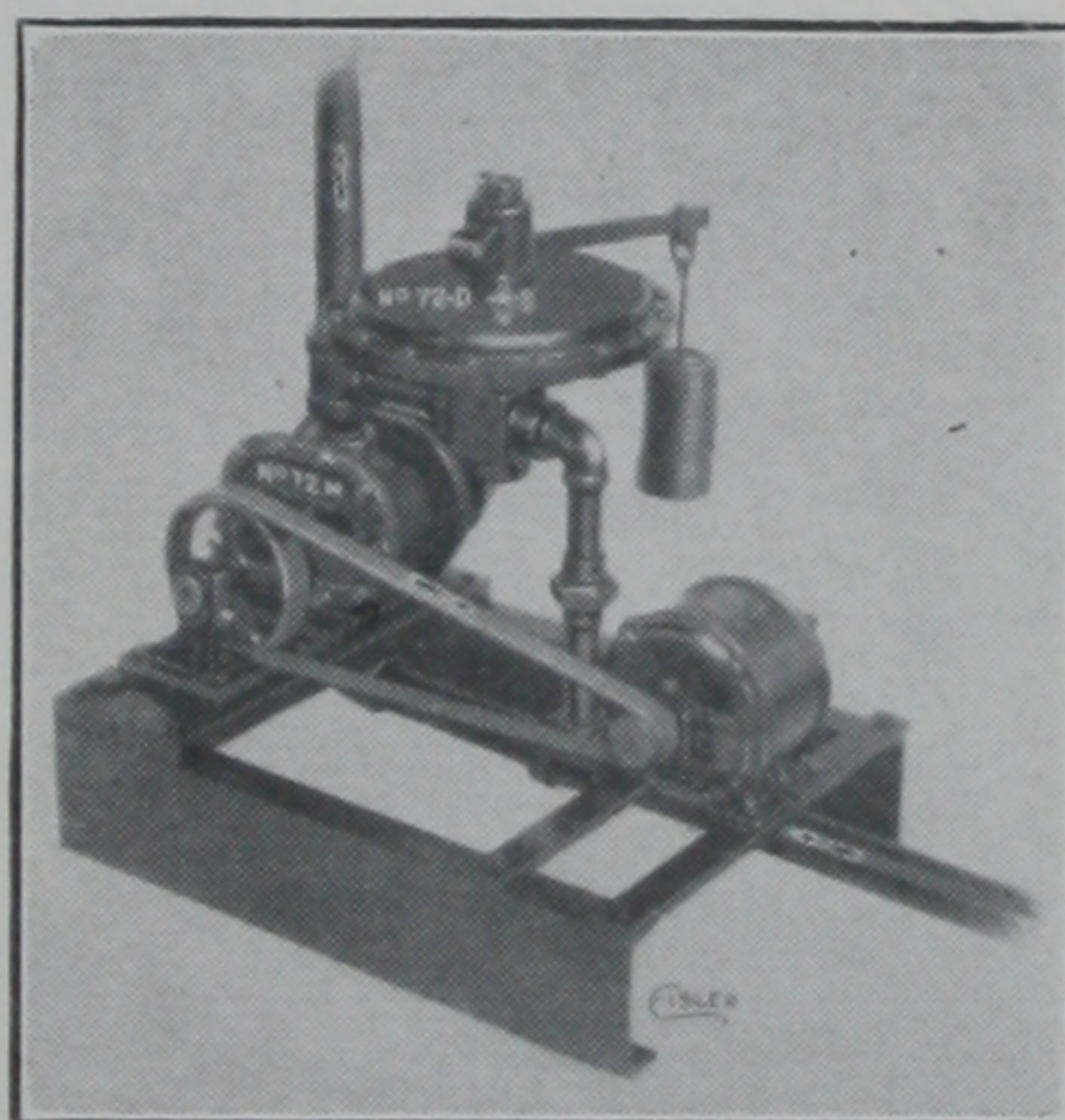
Made in several sizes



Machine No. 71-B

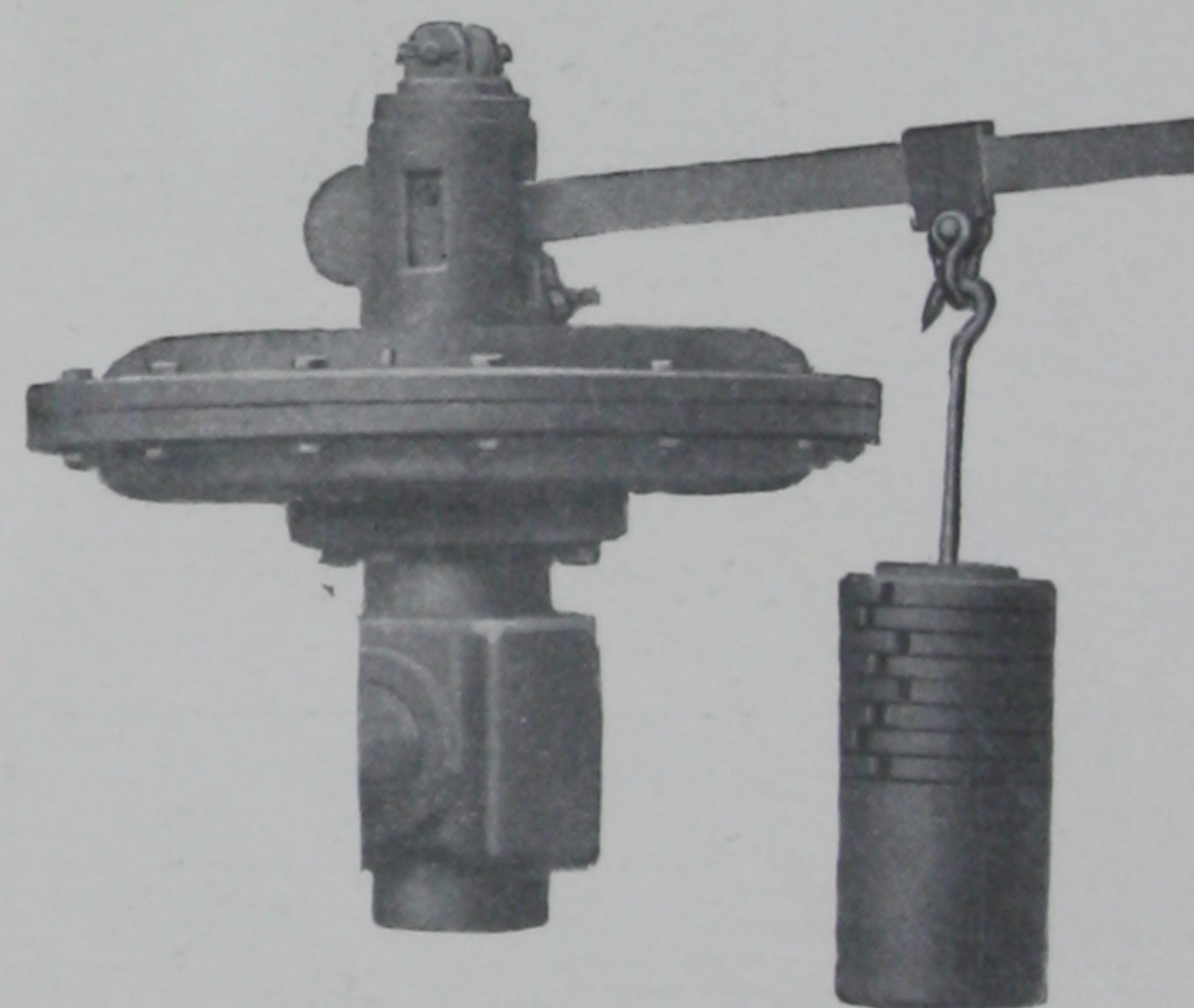
GAS BOOSTER AND REGULATOR

Belt or Motor Drive
 $\frac{1}{4}$ H. P. required



Machine No. 72-M

DIAPHRAGM REGULATOR FOR GAS OR AIR

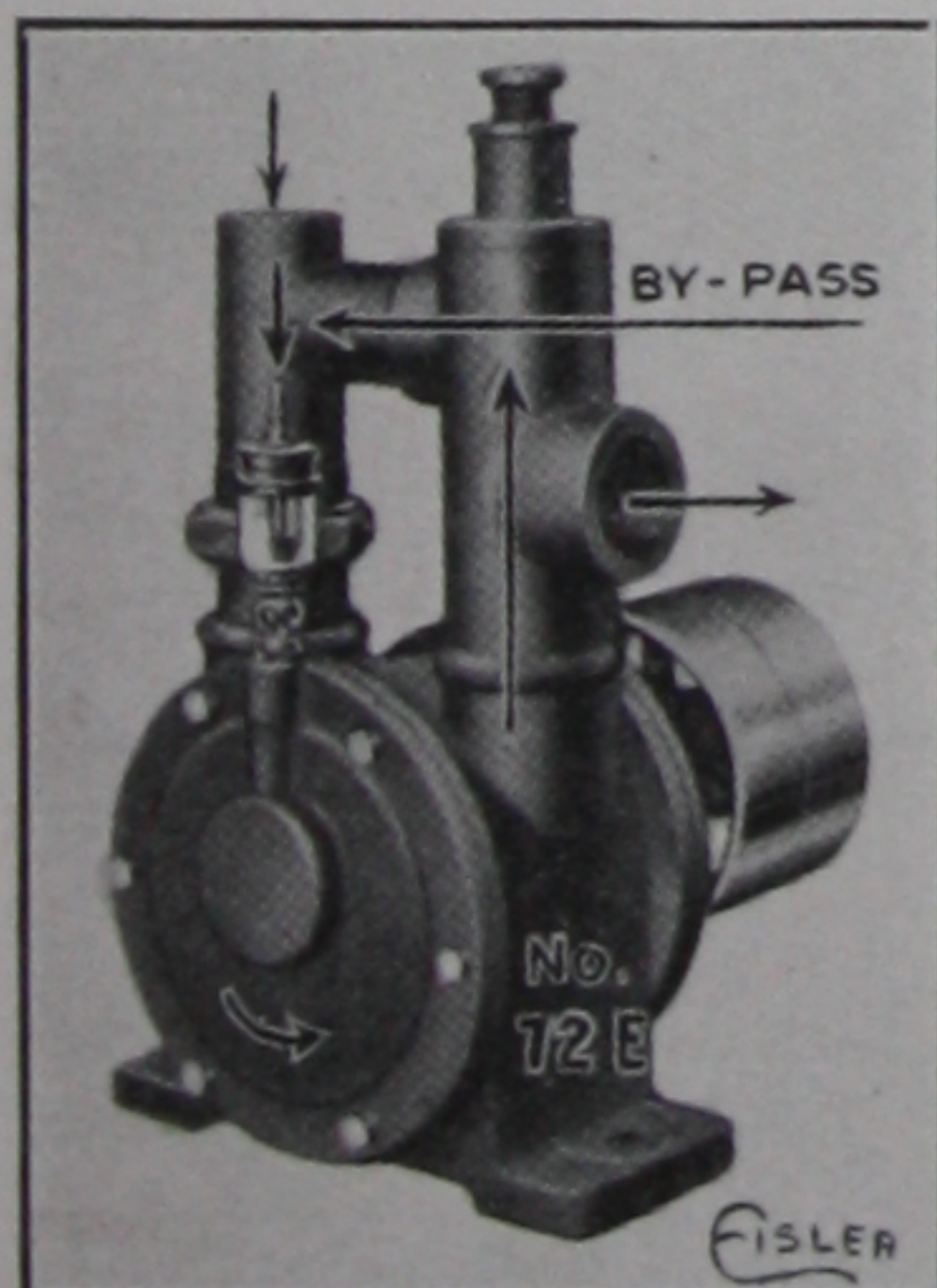


Machine No. 72-D

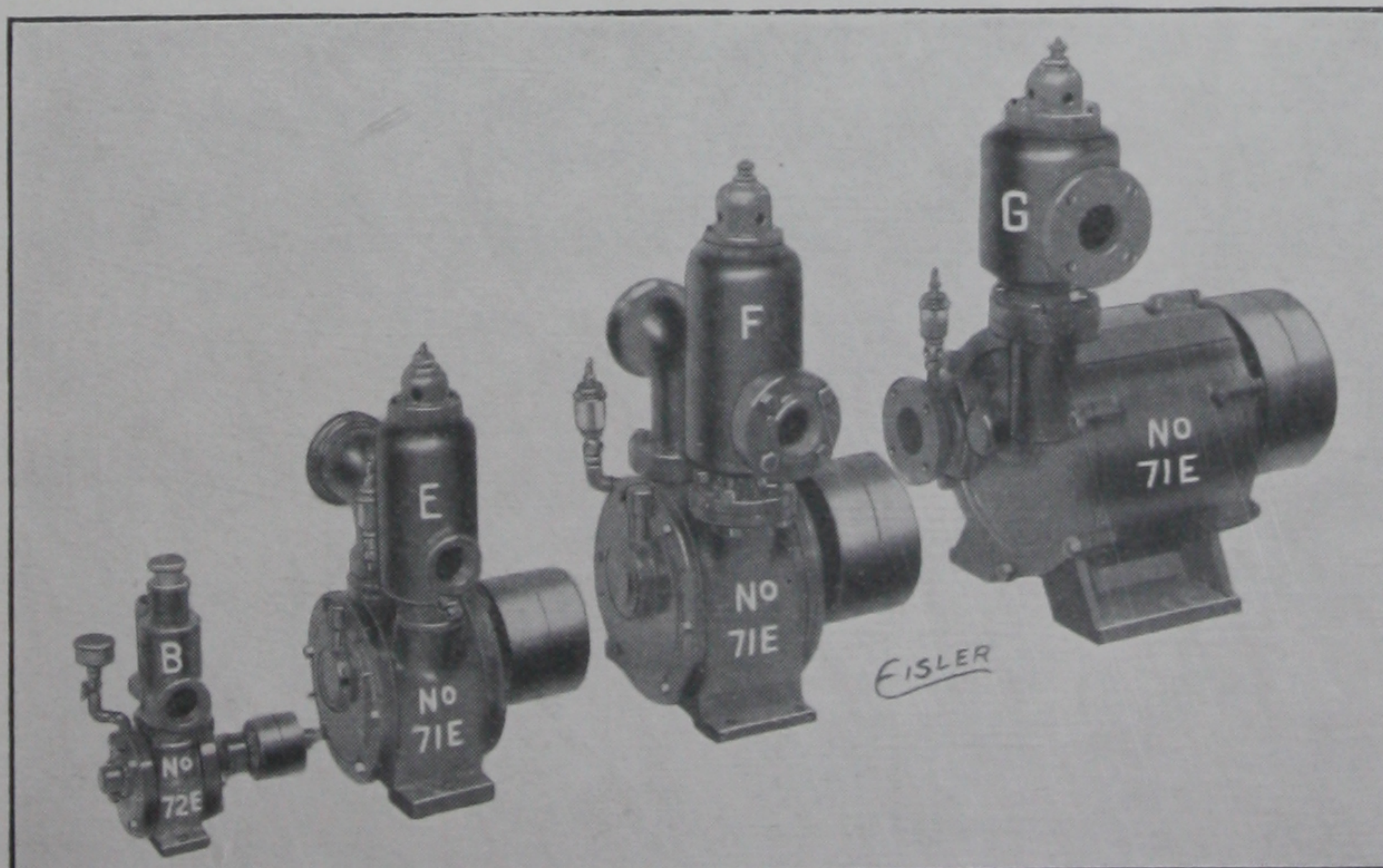
SILENT TYPE PRESSURE BLOWERS

Made in various sizes

GAS BOOSTER

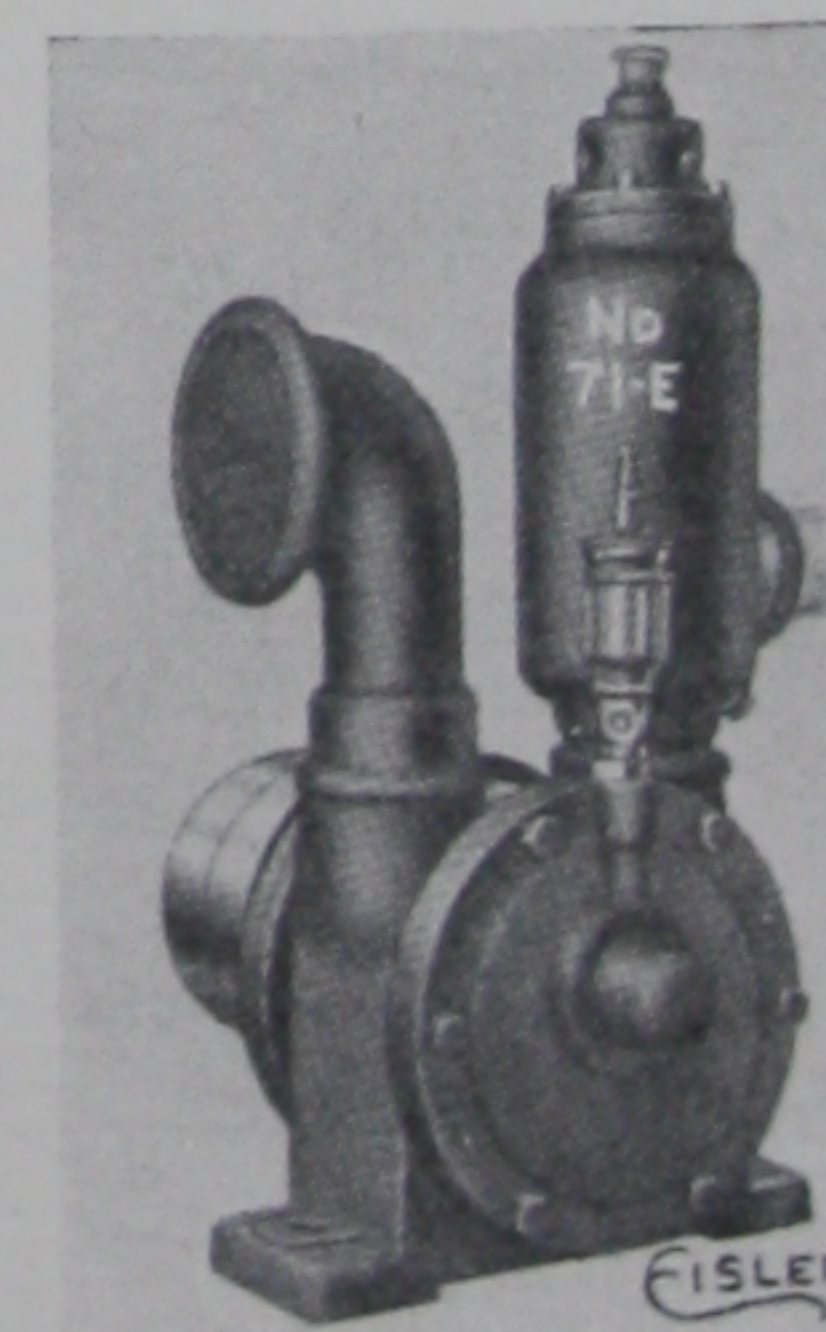


Machine No. 72-E



Machines No. 71-E

AIR PRESSURE BLOWER

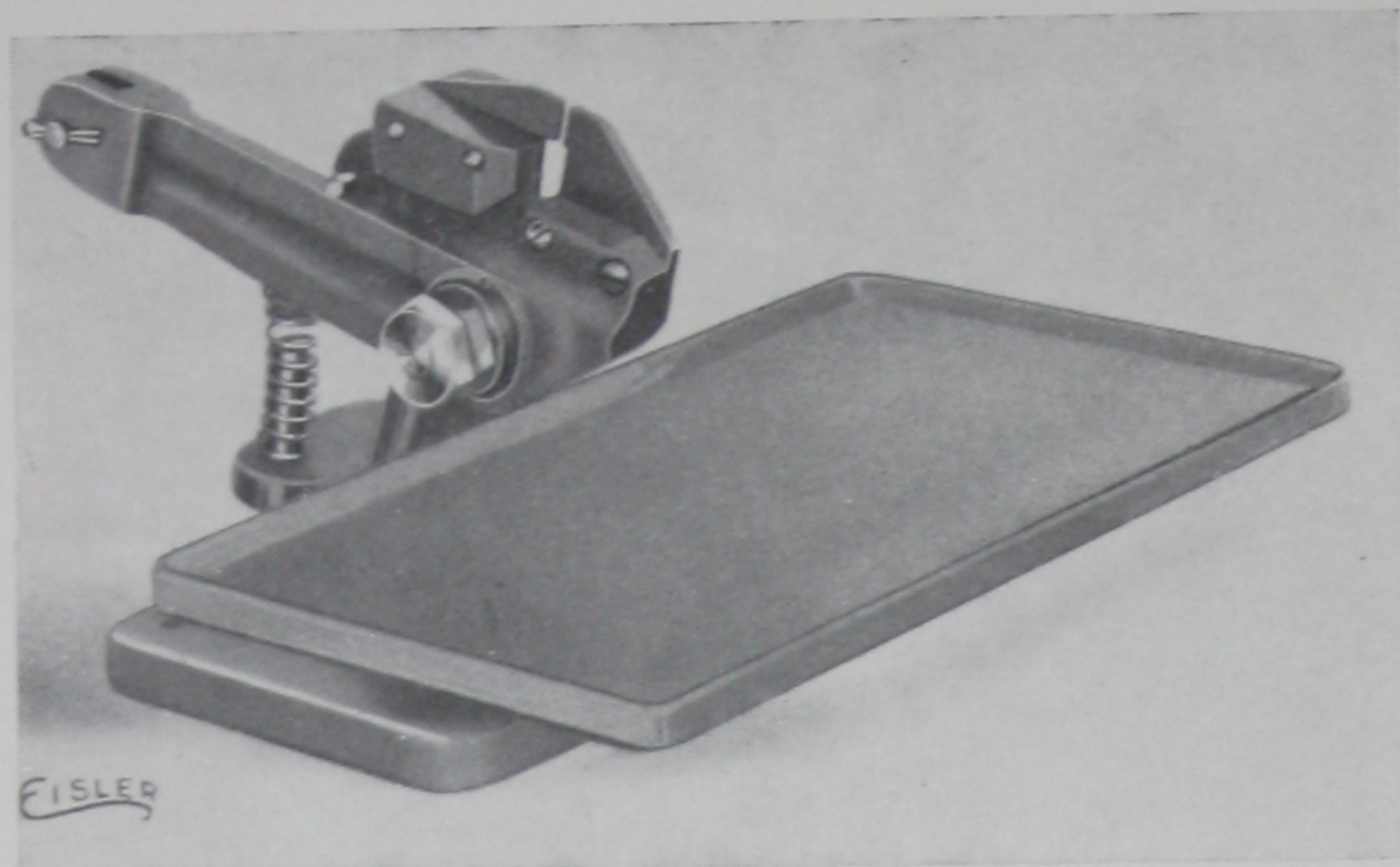


Machine No. 71-E

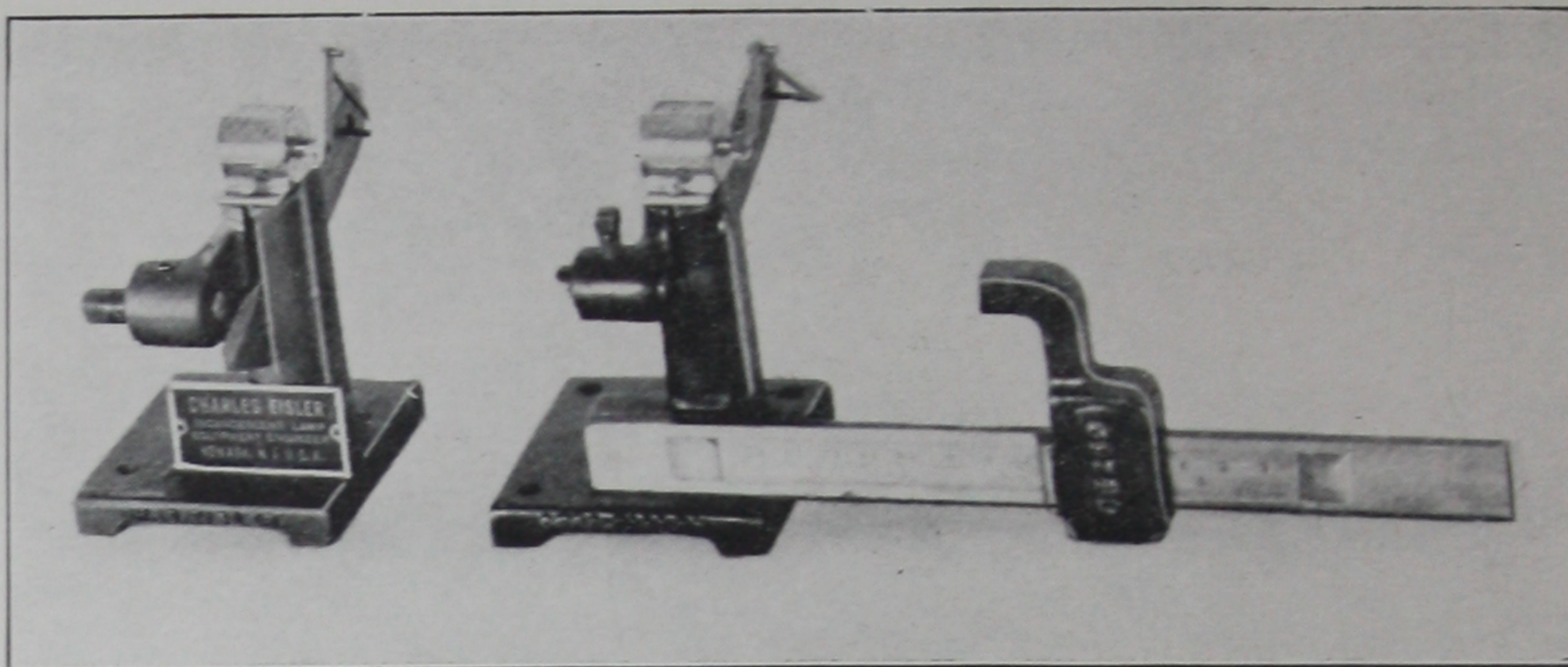
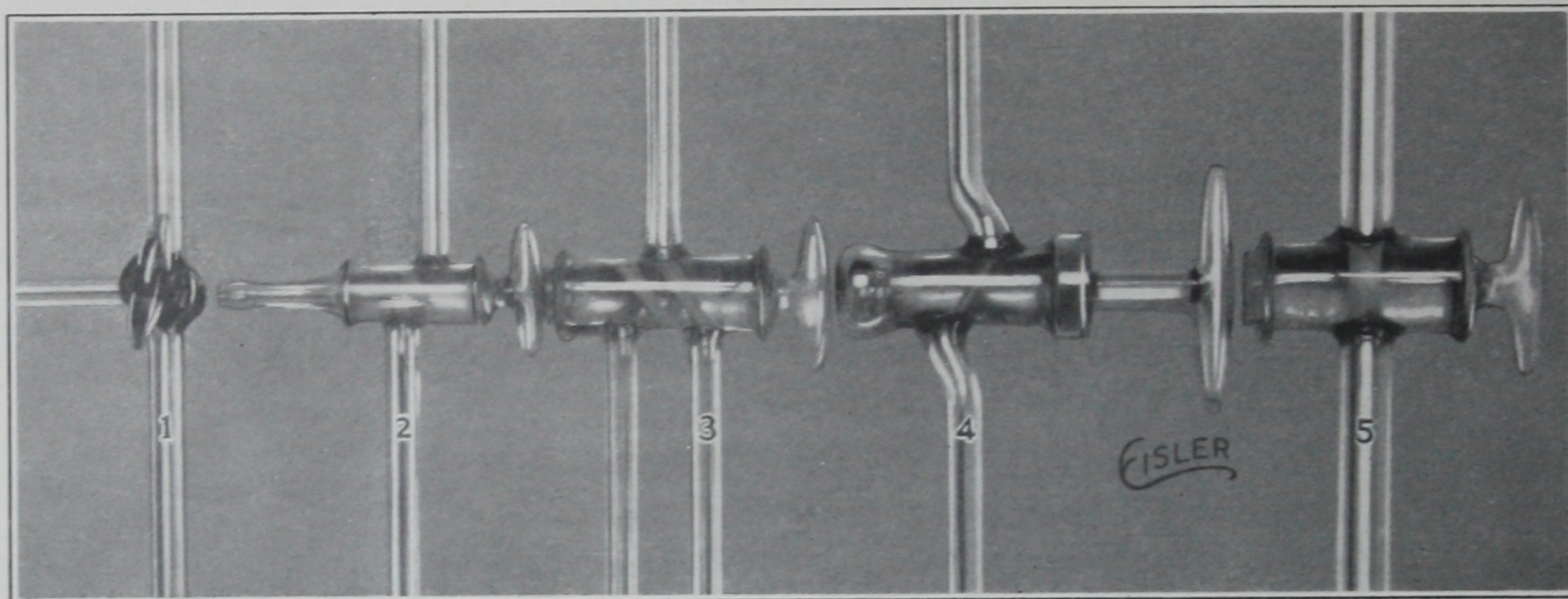
MISCELLANEOUS

SINGLE JAW TYPE CLAMPER, FOOT OPERATED

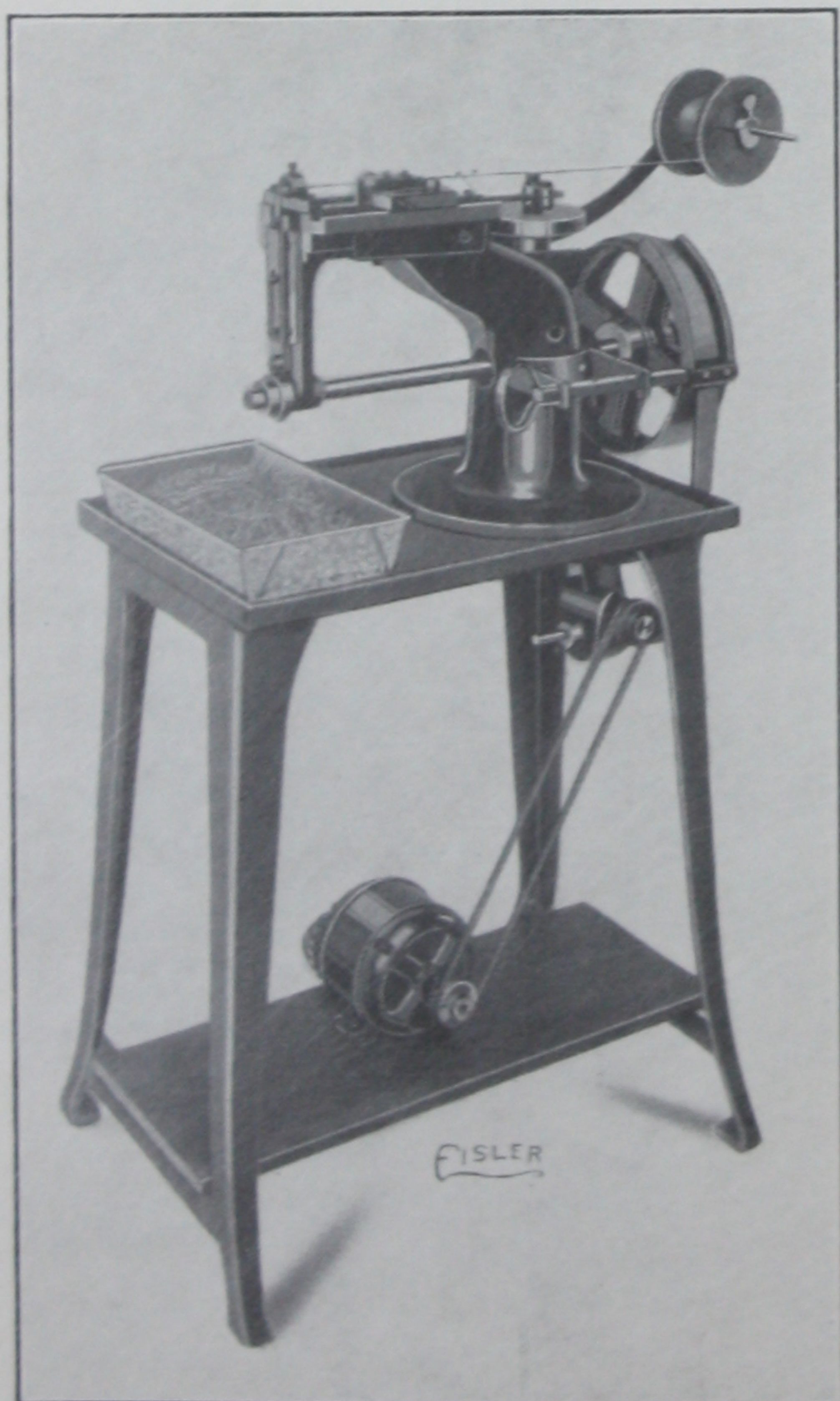
WIRE CUTTERS, FOOT OPERATED



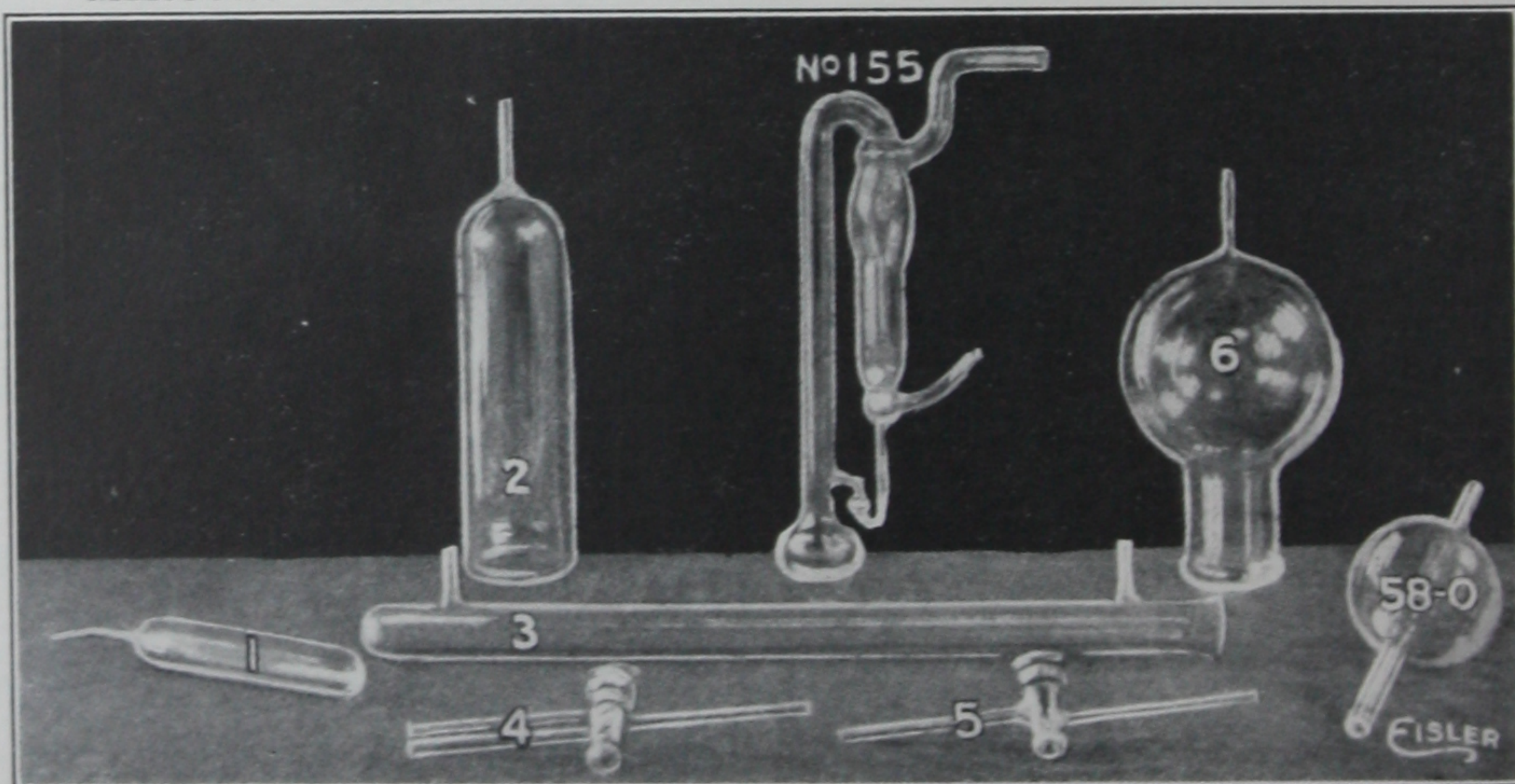
Machine No. 45

Machine No. 4
without Scale with
CounterMachine No. 4-S with Scale,
Stop and Counter**GLASS STOP COCKS**

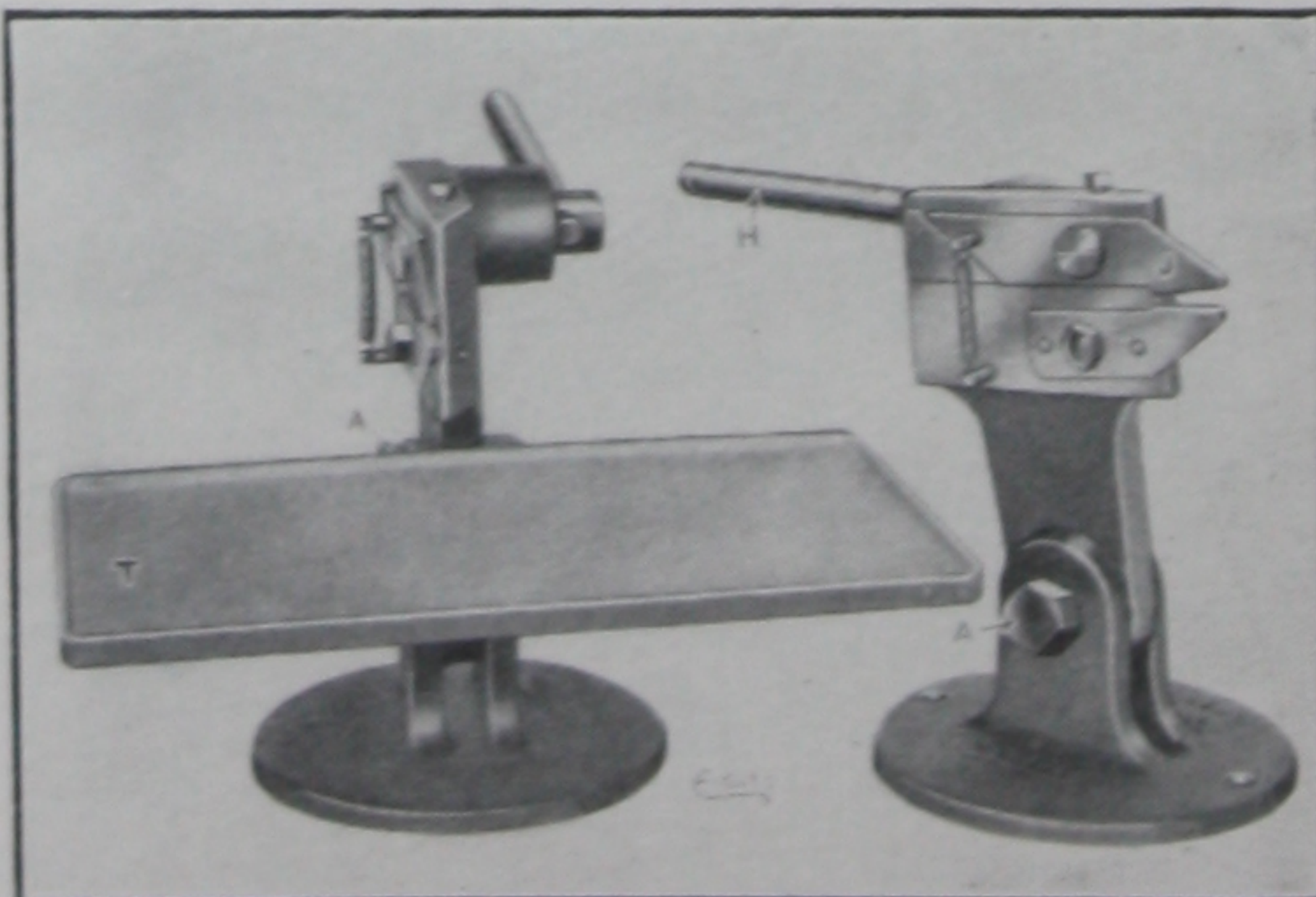
Cut No. 166

LIGHT TYPE AUTOMATIC WIRE
CUTTING MACHINE

Machine No. 111-L

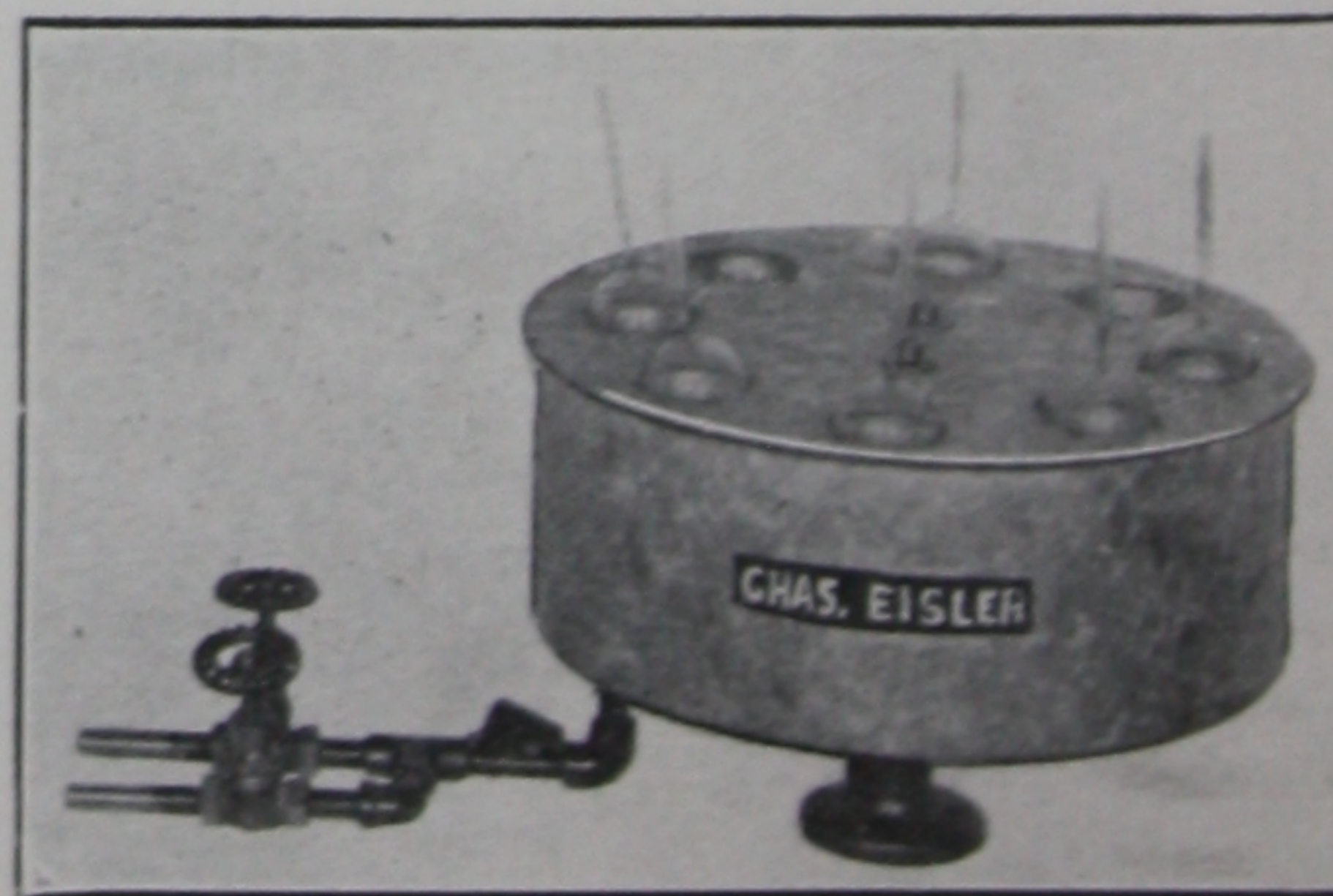
PYREX GLASS ACCESSORIES
MERCURY ASPIRATOR — OIL TRAP — GLASS COCKS AND ETC.

Cut No. 166-P

ADJUSTABLE CLAMPER
Foot or Hand Operated

Machine No. 39-R

REPAIR PREHEATER



Machine No. 63

COPPER CLAD LEAD WIRE — NICKEL WIRE — NICKEL RIBBON — GUM RUBBER TUBING

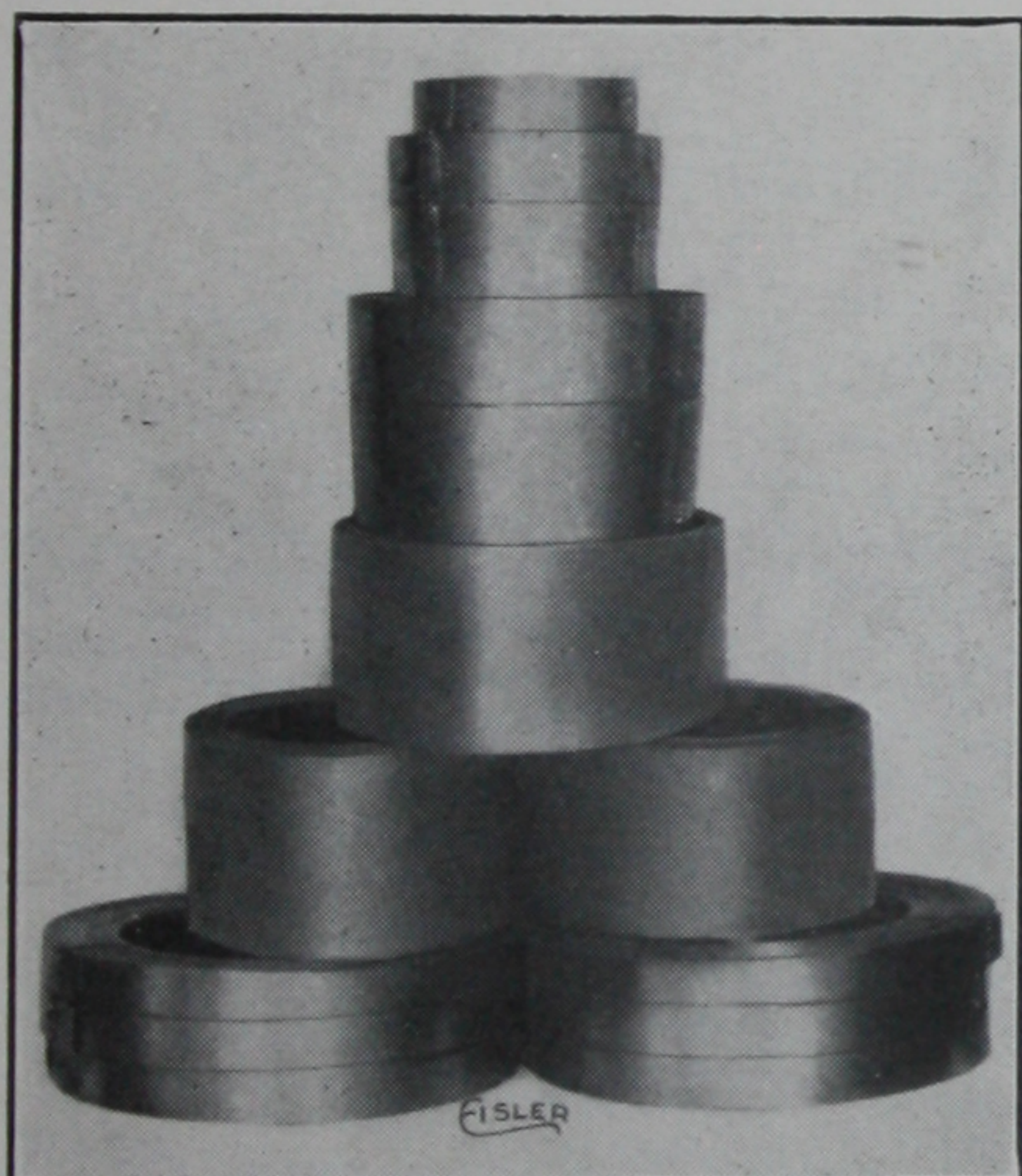
We carry a very large stock of the highest grade of copper clad, nickel wire, nickel ribbon, molybdenum and gum tubing. The gum rubber is specially made for our "High Vacuum" pump connections. We are in a position to fill your orders and make prompt shipments.

NICKEL WIRE

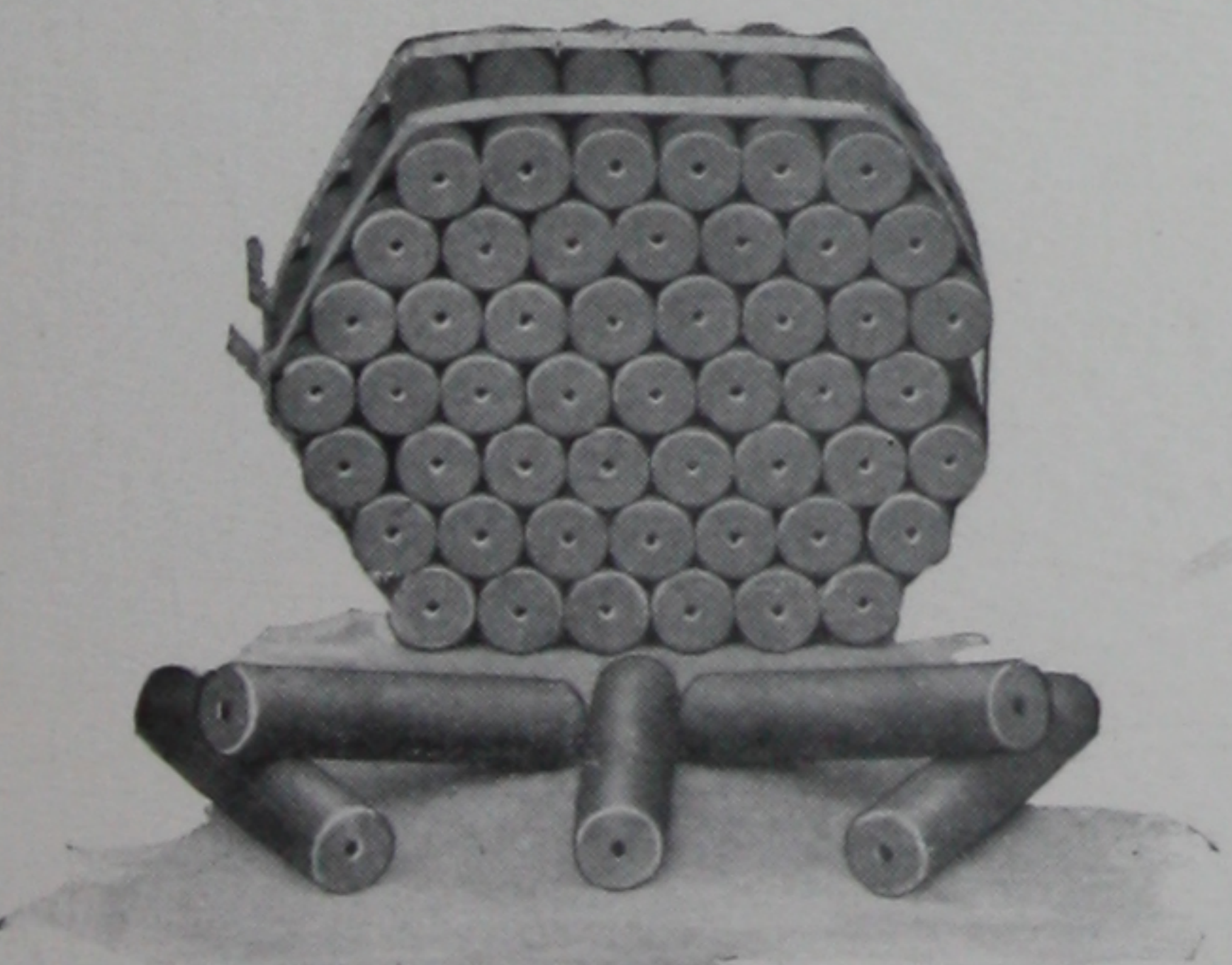


Nickel Wire From .001 Up to Any Size

NICKEL RIBBON



All Sizes and Widths

GUM
RUBBER
TUBINGMADE IN
ALL
SIZES

COPPER CLAD WIRE



Copper Clad From .006 and Upward

PURE NICKEL WIRE
DATA

No. B. & S.	Diam. in Inches	Feet per pound Bare wire
6	.162	12.7
7	.144	15.9
8	.1285	20.0
9	.114	25.6
10	.102	31.3
11	.091	40.0
12	.081	50.0
13	.072	63.7
14	.064	80.6
15	.057	102.0
16	.051	128.0
17	.045	161.0
18	.040	204.0
19	.036	256.0
20	.032	323.0
21	.0285	400.0
22	.0254	526.0
23	.0226	667.0
24	.0201	833.0
25	.0179	1031.0
26	.0159	1,299.0
27	.0142	1,639.0
28	.0126	2,083.0
29	.0113	2,632.0
30	.0100	3,334.0
31	.0089	4,167.0
32	.0080	5,263.0
33	.0071	6,667.0
34	.0063	8,333.0
35	.0056	10,530.0

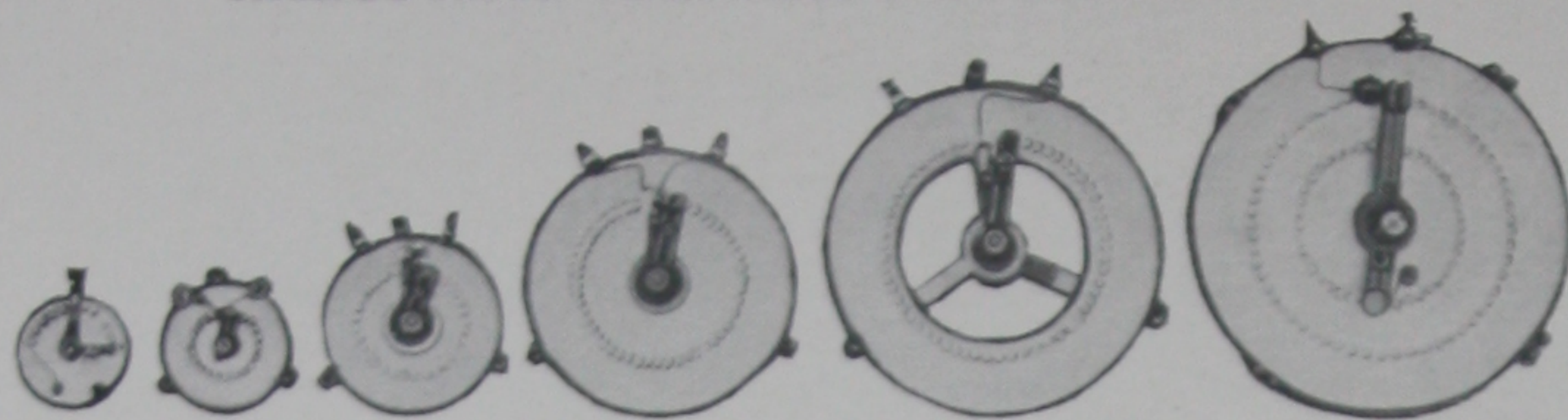
COPPER
CLAD
WEIGHT
DATA

Inches	Feet
.008	5,424
.010	3,472
.012	2,411
.014	1,771
.016	1,356
.018	1,072
.020	867.6
.025	5,555
.030	385
.040	217
.050	138
.060	120
.070	110
.080	95
.090	80
.100	35

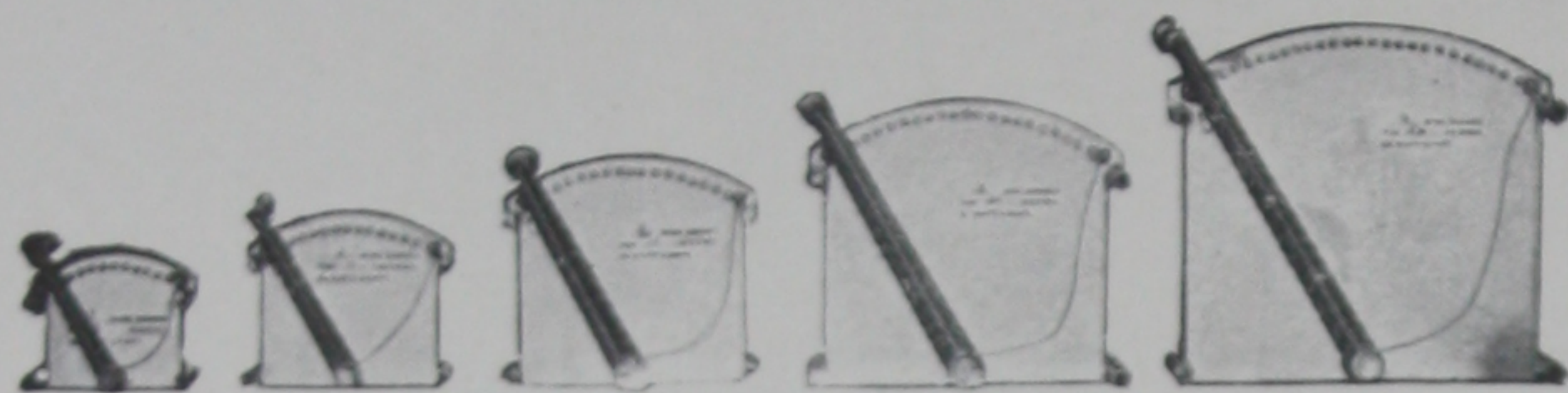
ELECTRICAL APPLIANCES FOR NEON TUBE MAKERS

We make practically every type of apparatus needed in connection with the manufacture of neon sign tubes, and will be glad to quote you on anything special you may be in the market for.

RHEOSTATS ARE MADE IN ALL SIZES

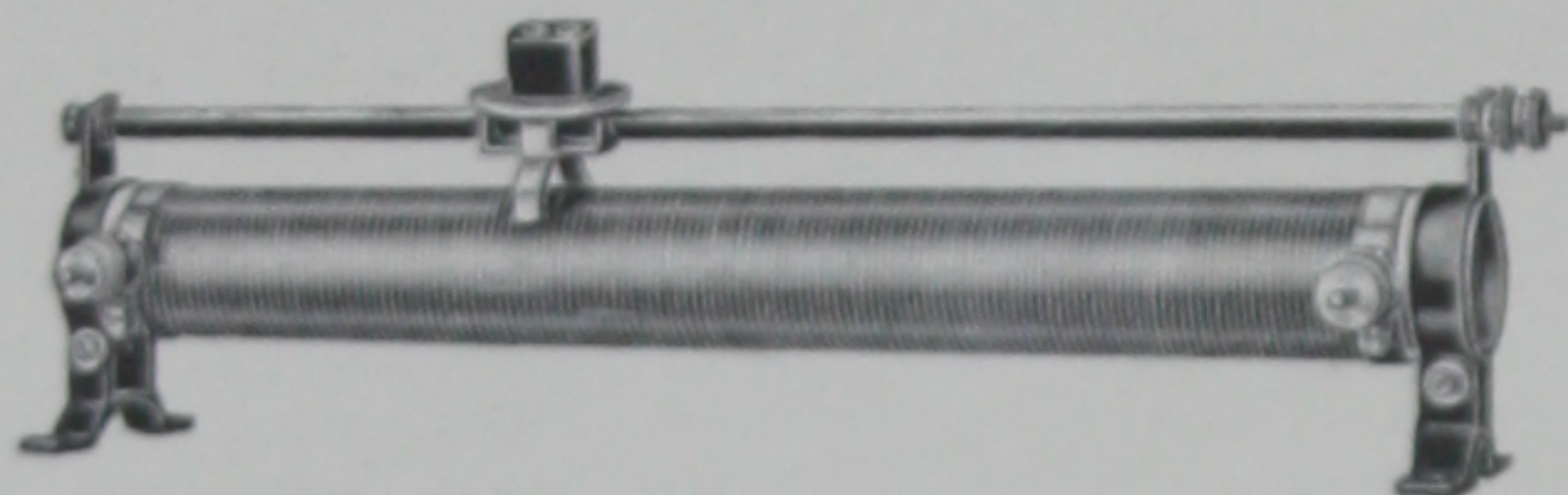


Machine No. 123-R



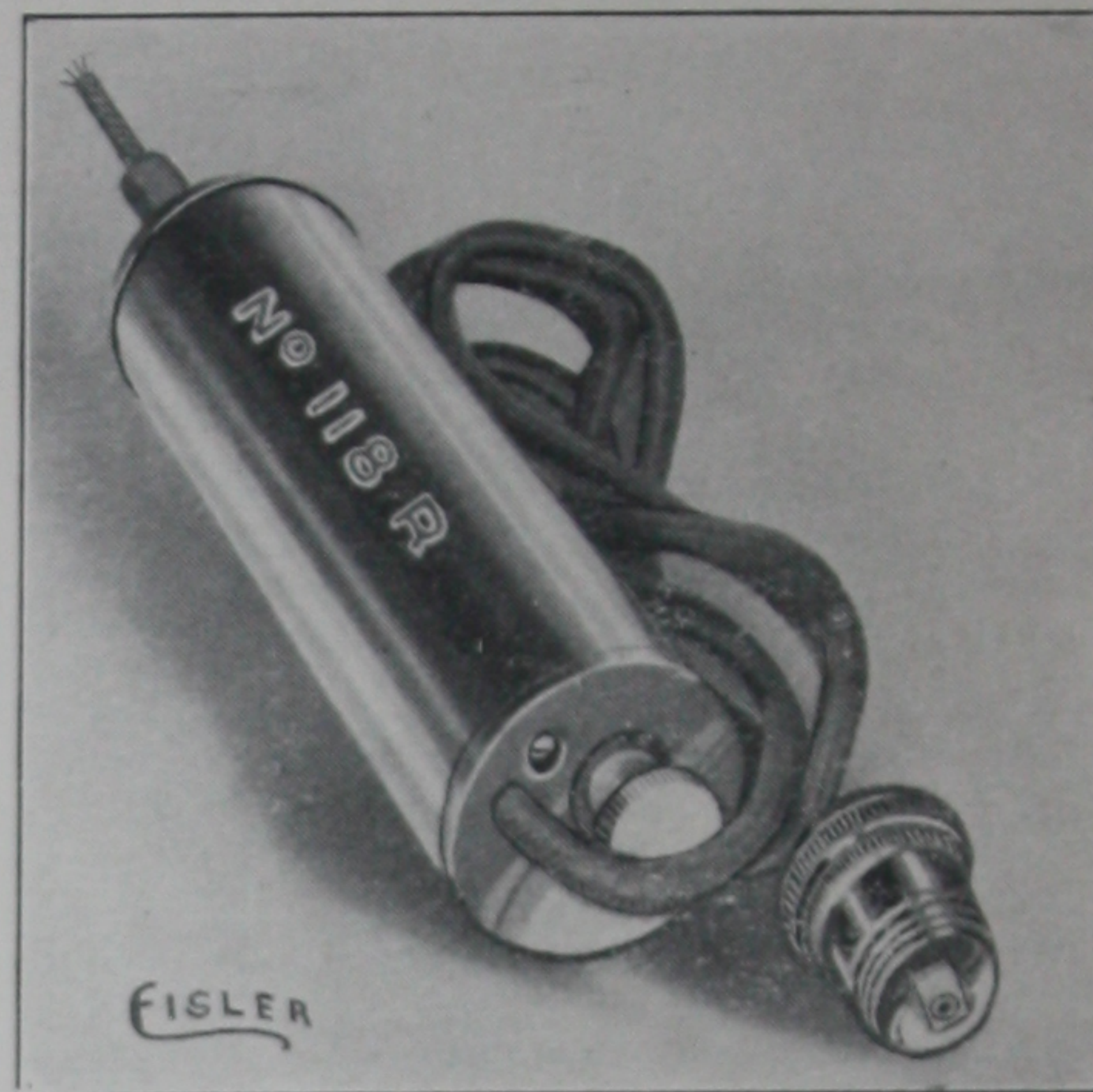
Machine No. 123

Sliding Rheostat Regular Stock Size



Machine No. 124

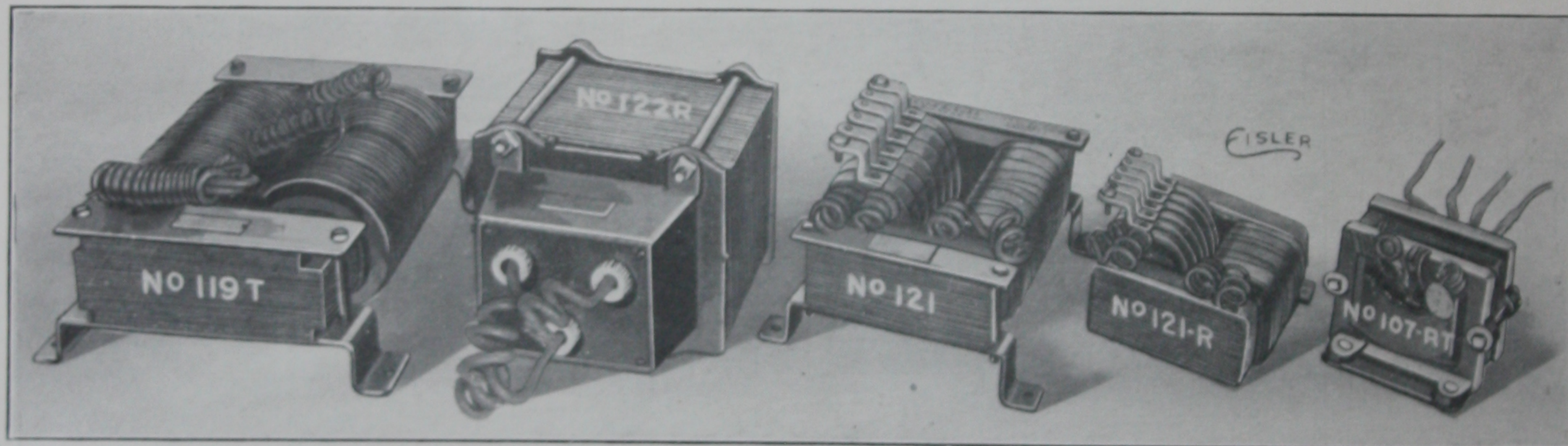
SPARK COIL FOR TESTING
VACUUM



Machine No. 118-R

Showing a few of the Many Types of Transformers we Manufacture

We are prepared to make any Transformer to your drawings and specifications.
These Transformers are carried in Stock for Immediate Delivery.



MACHINE No. 119-T
Transformers used in our
Bombarders

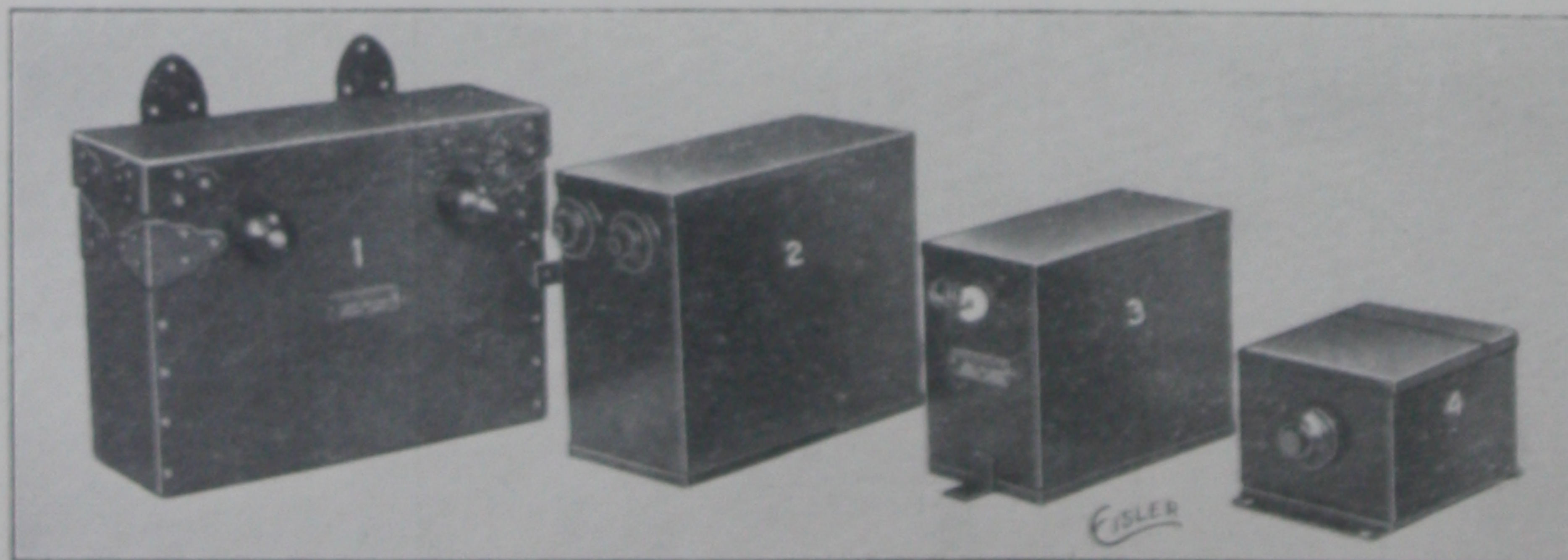
MACHINE No. 122-R
110 and 220 volt
Transformer
Balancing Coil

MACHINE No. 121
Transformer used on
our Spot Welder
No. 93. 1 KVA

MACHINE
No. 121-R
Transformer
used on our Spot
Welders
1/2 K. W.

MACHINE
No. 107-RT
Small low volt-
age Step-down
Transformer

STANDARD STOCK SIZE NEON TUBE TRANSFORMERS



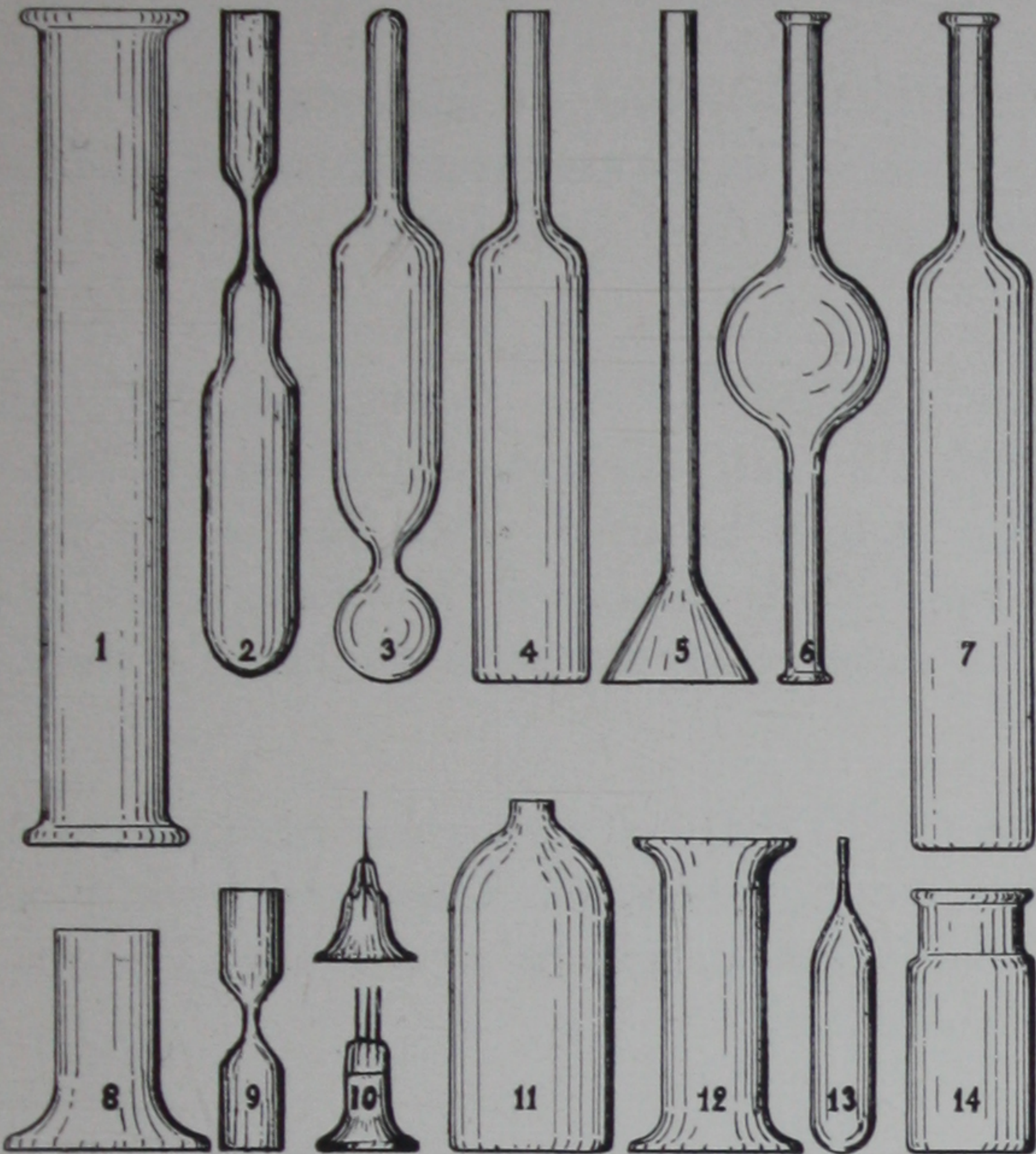
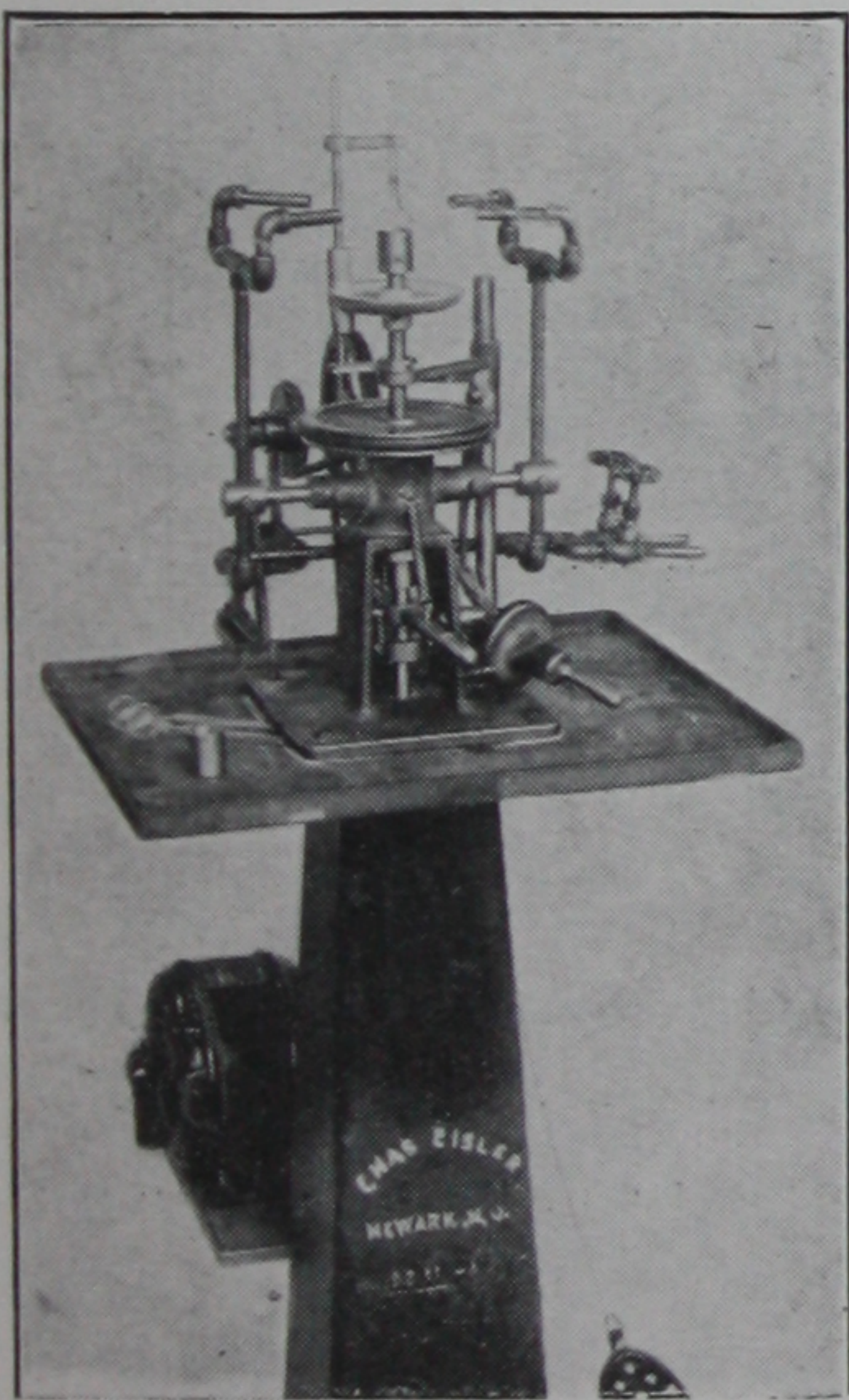
Cut No. 118-N

- 1—400 Watt type, 110 volt primary, 16,000 volt secondary open circuit, same current rating as 200 watt type.
- 2—200 Watt type, 110 volt primary, 12,000 volt secondary open circuit. This transformer will deliver its full load of 30 milliamps with a short circuited secondary.
- 3—100 Watt type, 110 volt primary, 12,000 to 15,000 volts secondary open circuit rating. This type will deliver up to 16 milliamps and will not be harmed by any short circuit conditions on the secondary side.
- 4—75 Watt type, 110 volt primary, 10,000 volts secondary open circuit, this type will deliver up to 12 milliamps, and will not be harmed by any short circuit conditions on the secondary side.

SPECIAL MACHINES

We are Specialists in the manufacture of special machines needed in glass working. Consult Eisler when in need.

A FEW OF THE MANY GLASS NEEDS WE
HAVE MADE SPECIAL MACHINES FOR

**BUTT SEALING MACHINE**

Machine No. 102-DS

FLANGING MACHINE

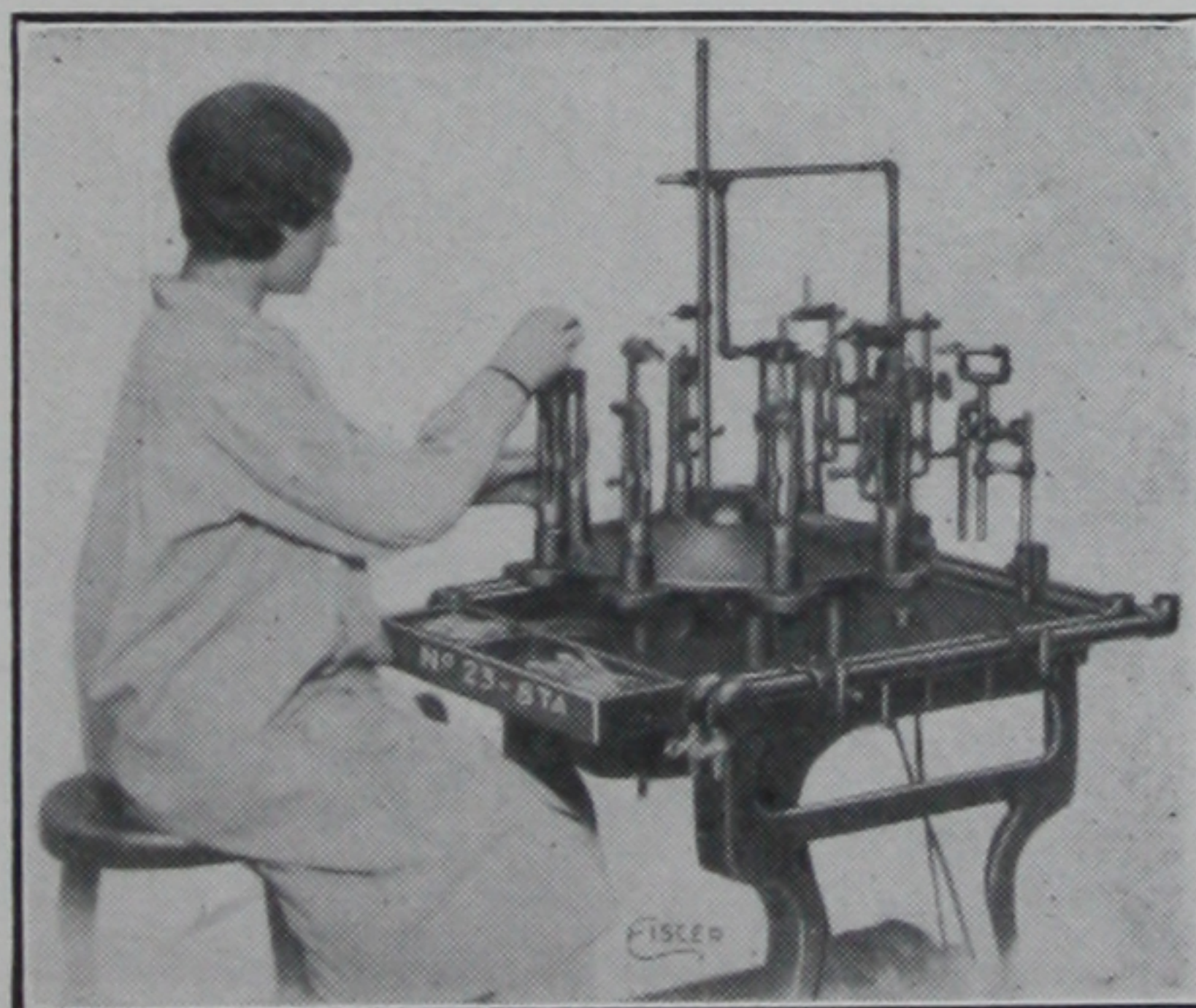
Glass shape 1



Machine No. 25-H

AMPULE CONSTRICTION MACHINE

Glass shape 2



Machine No. 23-8TA

AMPULE MOULDING MACHINE

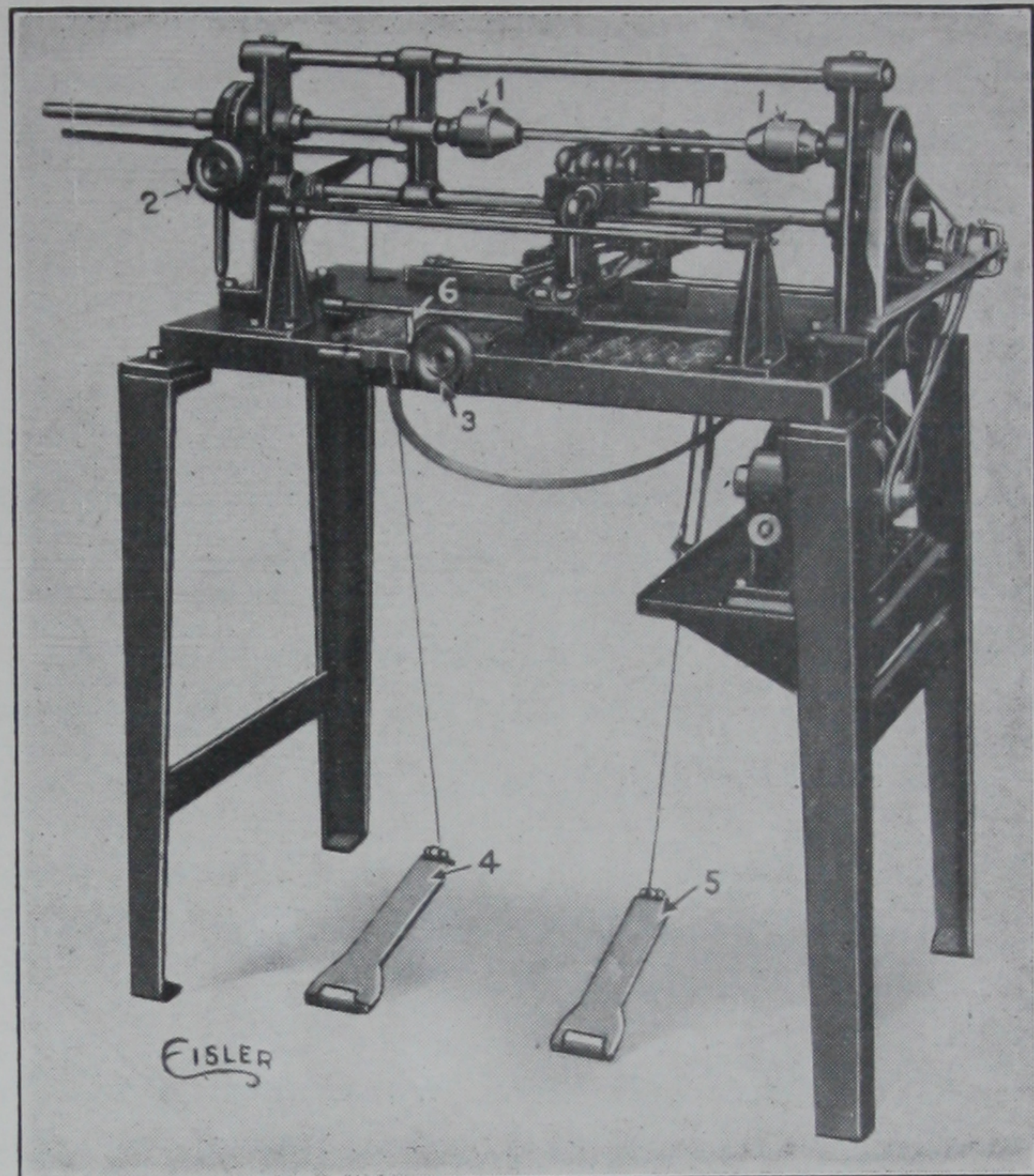
Glass shape 2 & 3



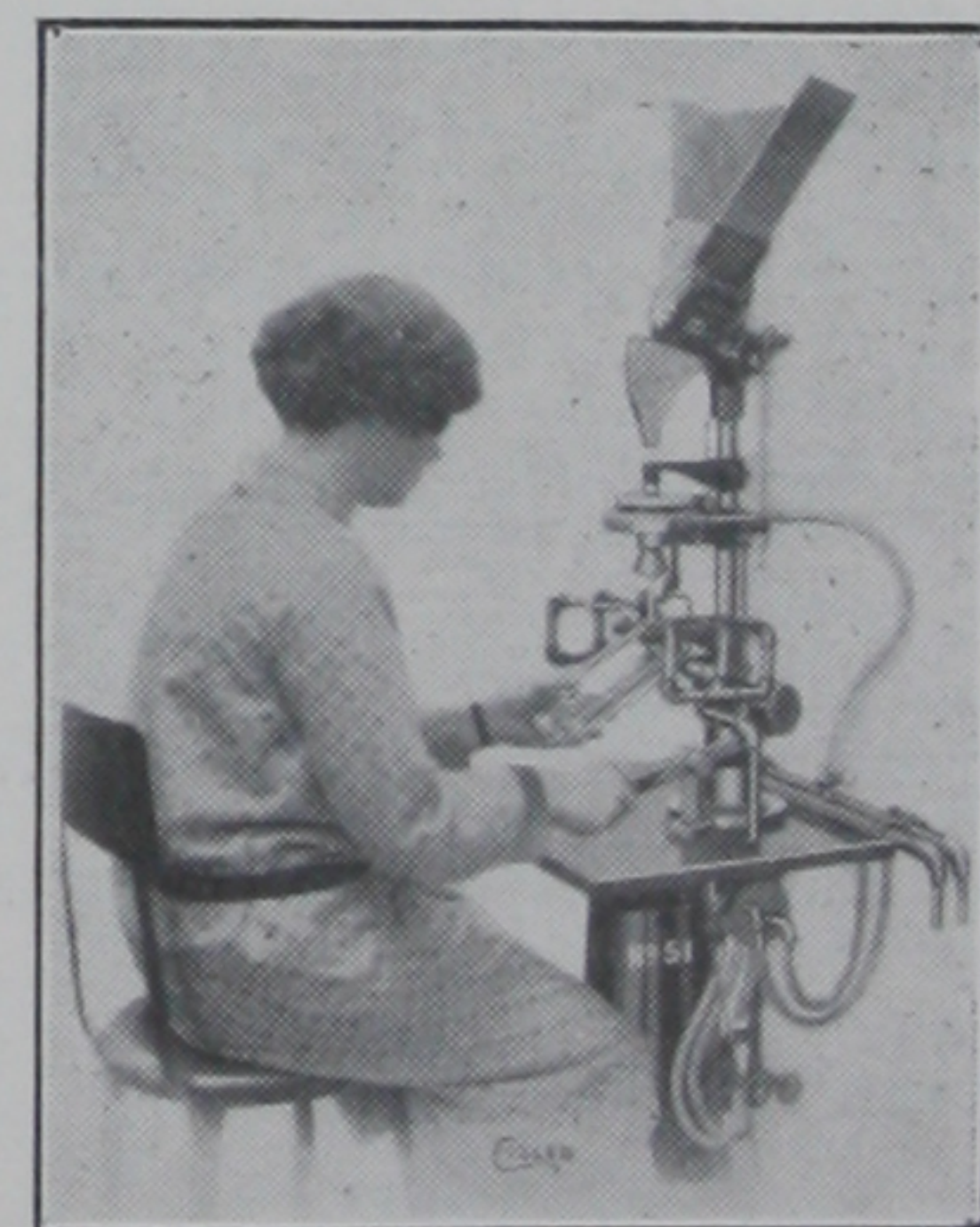
Machine No. 165

BULB BLOWING MACHINE

We manufacture Bulb Blowing Machines for bulbs below 2 inches outside diameter, which can be readily blown out of glass tubing.



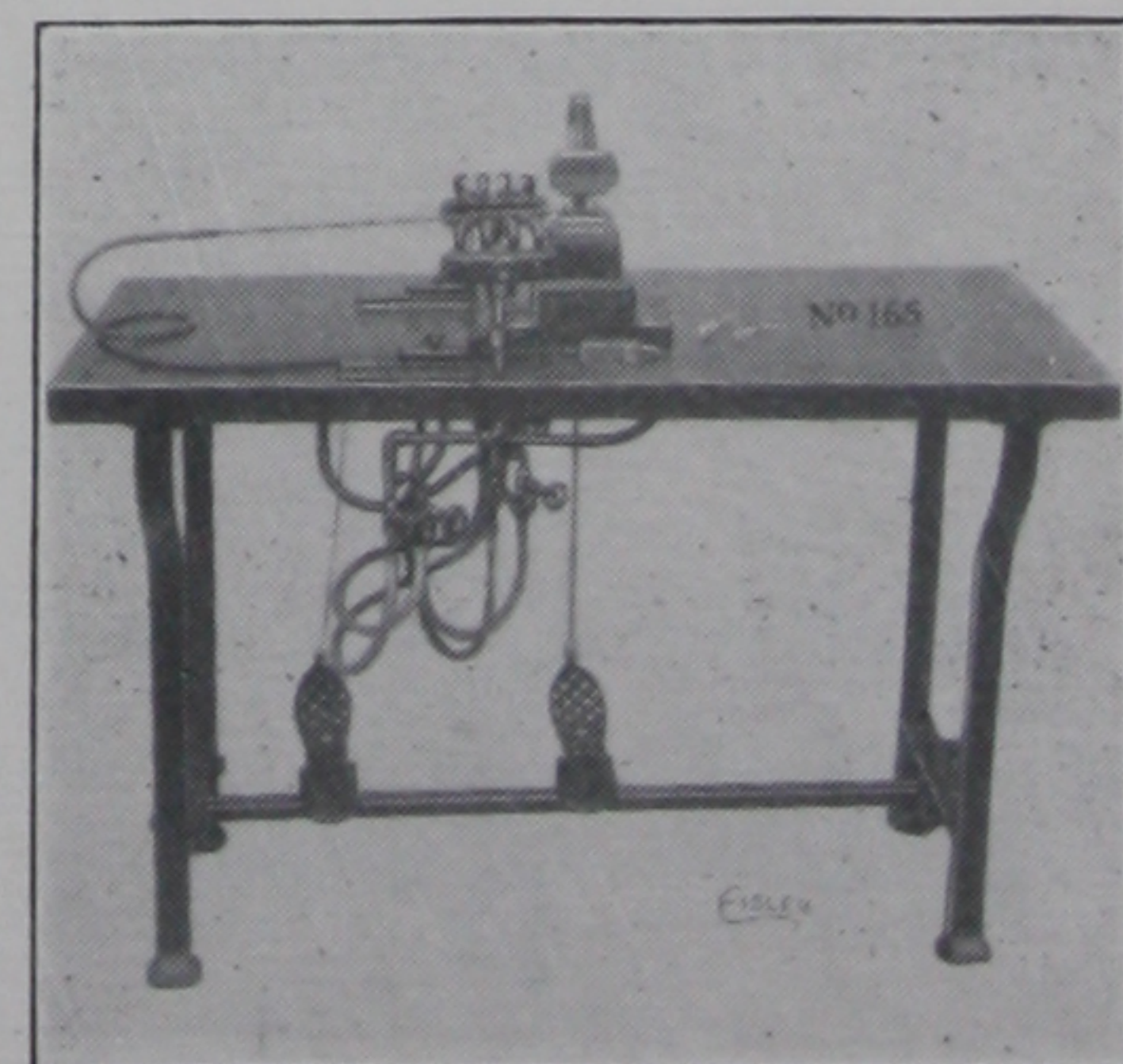
Machine No. 103-L

TUBULATING MACHINE

Machine No. 51

HYDROMETER MOULDING MACHINE

Glass shape 2 & 3



Machine No. 165

USEFUL INFORMATION

GAS PRESSURE—Gas pressure recommended for neon tube manufacturing 9/12 inch of water column, for gas booster and regulator see page 15.

AIR PRESSURE—Air pressure recommended for neon tube manufacturing 2 to 3 pounds pressure per square inch, for air pressure blowers and regulators, see page 15.

AIR PRESSURE—27.7 inches of water column to 1 pound per square inch.

AIR PRESSURE—2.041 inches mercury column equal to 1 pound per square inch.

GAS BOOSTER & REGULATOR—It is very essential for successful glass working to boost the gas pressure.

VACUUM OIL—For Eisler High Vacuum Pumps, Gravity 29½, Flash 410, Fire Test 470, Cold Test 35, Viscosity @ 100-180.

DEGASIFYING—All lead wires and electrodes should be degasified before using, see page 7.

HIGH FREQUENCY APPARATUS—Bombarding is the name given for the method employed in removing all the impurities from the electrodes. This is done by means of High Frequency heating during the exhausting operation.

MAGNESIUM GETTER—Metallic Magnesium Getter Pills are used in Neon Sign Tubes in order to absorb all impurities which may still remain in the tube after the various stages of operation.

TRANSFORMERS—We are prepared and equipped to supply you with all types and sizes of transformers: see page 18

STOCK SIZES

100 Watt type, 110 volt primary, 12,000 to 15,000 volts secondary open circuit rating. This type will deliver up to 16 milliamps and will not be harmed by any short circuit conditions on the secondary side.

200 Watt type, 110 volt primary, 12,000 volt secondary open circuit. This transformer will deliver its full load of 30 milliamps with a short circuited secondary.

400 Watt type, 110 volt primary, 16,000 volt secondary open circuit, same current rating as 200 watt type.

GLASS BULBS—Lime or lead glass may be used for sealing in the electrode before it is sealed on the bulb T 8 W (one inch) (Corning).

GLASS TUBING—Flare tubing No. 33 and 34 (15/32 inch) G1 glass (Corning) This tubing should be used when the above type of glass bulb is employed. The flare tubing is used for supporting the stem of the electrode.

GLASS CUTTING—Pyrex glass requires steel disc for cutting purposes. Lead and lime glass are readily cut by means of our special carborundum wheel.

GLASS (Corning)—Expansion of glass depends upon the ability to seal one glass to another. Colors and expansions are as follows:

	Color	Expansion
Corning 388	amber seals to G1	0590
Corning 333	uranium or canary (seals to G1)	0590
Corning 532	blue seals to G1	0590
Corning G1 clear		0590
Hard Glasses		
Nonex 322	canary or uranium seals to Pyrex	0539
Nonex 345	amber seals to Pyrex	0539
Nonex 559	blue seals to Pyrex	0539

On account of the low expansion of the hard glasses they are less subject to strain and therefore, can be worked with less annealing. Glass also being harder is subject to less scratching.

RED COLOR signs are produced by filling the tube with pure neon gas. Clear tube is used.

GREEN COLOR signs are produced by filling the tube with neon gas and a certain percentage of mercury vapors.

BLUE COLORS, for light blue, clear glass tubing should be used, and for dark blue, blue glass tubing should be employed. Mercury vapors with neon gives the glass tubing a blue appearance.



EISLER

*The name that stands for
Superior Design and Quality*



The Plant behind the Eisler Products



The Men who make the well known Eisler Products

*The largest organization
of its kind, well equipped to
fill your rush orders. ...*

EISLER ENGINEERING COMPANY, INC.

740 - 772 South 13th Street

NEWARK, N. J., U. S. A.

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CCA